FIFTIETH ANNIVERSARY

ACR 2019

Oct 17-20 ATLANTA

ASSOCIATION FOR CONSUMER RESEARCH

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Volume XLVII

ADVANCES IN CONSUMER RESEARCH

Volume XLVII
PROCEEDINGS

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Advances in Consumer Research, Volume 47

Rajesh Bagchi, Lauren Block, Leonard Lee

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International Standard Book Number (ISBN): 978-0-915552-80-1

sku: 2019ACRvol47

Preface

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The 50th Annual Conference of the Association for Consumer Research (ACR) was held at the Hyatt Regency in Atlanta, Georgia from October 17-20, 2019.

This conference marked ACR's Golden Anniversary—fifty years of an interdisciplinary, cross-method, international association of scholars building knowledge on all aspects of consumers' thoughts, decisions, and behaviors. Thus, our conference theme was *Becoming Wise*. This theme of Becoming Wise was integrated across our competition papers, special sessions, Knowledge Forums, WorkShops and LearnShops. What is wisdom? It is an acknowledgment of our past: our accumulated base of scientific learning, our pot of generally accepted beliefs, and the written and oral transmissions of our teachers and mentors. But it is more than that. It is our present, our now. It is our ability to discern what is true and right, and to couple that with what is just. To be wise is to make good judgments and to behave with sagacity. To that end, we are always Becoming Wise.

The conference attracted over 1200 participants from 41 different countries across the globe. We received 1070 total submissions and accepted 654, which represents a 61.12% acceptance rate. This year's conference presented 280 competitive papers (acceptance rate of 52.14%), 62 Special Sessions (56.36% acceptance), 7 video submissions, 11 Knowledge Forums, and 10 Invited WorkShops and LearnShops.

We thank our generous sponsors: Sheth Foundation, University of British Columbia Sauder School of Business, University of Florida Warrington College of Business, University of South Carolina Darla Moore School of Business, The University of Oregon Lundquist College of Business, California State University, Northridge (CSUN), Journal of the Association for Consumer Research, Journal of Consumer Research, Society for Consumer Psychology, SONA Systems, Stukent, Inc., LINKS Simulations, BIOPAC Systems, Inc., Palgrave Macmillan, the Marketing Science Institute (MSI), and University of Chicago Press.

Many wonderful people worked tirelessly to help us make this conference possible. We thank our Program Committee, Competitive Paper Reviewers, Working Paper Reviewers, and Videography Reviewers. We especially wish to thank Derick Davis, Rhonda Hadi, and Lama Lteif (Working Paper Chairs), Jennifer Escalas, Laura Peracchio, and Tiffany B. White (Sharing Stories Chairs), Joonas Roka and Ekant Veer (Videography Chairs), and Keisha Cutright and Thomas Kramer (Doctoral Symposium Chairs). Many thanks also go to our excellent Associate Editors: Cindy Cai, Amber Epp, David Faro, Markus Giesler, Mathew Isaac, Yuwei Jiang, Tina Lowrey, Pragya Mathur, Brent McFerran, Maureen Morrin, Jeffrey Parker, Vanessa Patrick, Yael Steinhart, Manoj Thomas, Claire Tsai, Beth Vallen, Alice Wang, and Meng Zhu.

Special gratitude goes to ACR Executive Director Rajiv Vaidyanathan, our Conference Planners Paula Rigling and Melissa Morris, our graphics designer Roy Wiemann, and the ACR Executive Assistant Brenda Monahan.

Last but not least, we wish to sincerely thank Darren Dahl, ACR President 2019, for gifting us with the opportunity to organize the ACR conference and for his unconditional support and enthusiasm during the entire journey.

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2019 ACR Presidential Address

The Value of Wrong

Darren Dahl, University of British Columbia, Canada

My address today will be inspired by two distinct stories. The first centers on the battle between two competing iconic American brands: Mars and Hershey. Chronicled in the book "The Emperors of Chocolate," the rise of these two brands – over 100 years ago – was driven by their two leaders: Milton Hershey and Forrest Mars. Milton Hershey was a leader akin to Willy Wonka, an eccentric and benevolent man who built a town in Pennsylvania – named Hershey – where he located his chocolate factory. He also sought to foster community by building parks, a library and an orphanage, among other amenities. In contrast, Forrest Mars began his career working for his father, but soon left the company to work for Hershey's. After gaining experience working for the competition, he returned to Mars where he succeeded his father as president of the company. He was a strict leader, operating the company with a firm set of rules – a black book of protocols if you will. Forrest was renowned for maintaining his privacy; in fact, there are very few historical images of him on record. The company remains privately held to this day.

Hershey was the early market leader in chocolate in America, and the company was built around one specific chocolate bar brand – the Hershey Bar. One   fascinating thing about this brand was the early business model that established it. Namely, the price point was fixed at 5 cents, and was held static at this level for decades. Of course this meant that the size of the bar varied as the price of cocoa futures rose and fell. Over time, the bar became progressively smaller, and this presented an opportunity for Mars. In the early 1950's, Mars made a distinct strategic move and came to market with much bigger bars (e.g., Mars, Snickers, etc.) priced at 10 cents. The market reacted positively to this change, and for the first time in history Mars was the market leader in confectionary in North America. How did Hershey react to this strategic move? As one might guess, they pursued points of parity and increased both the price of the Hershey bar (to 10 cents), and the size of the bar. Unfortunately this was the wrong move; the market reacted even more negatively, and additional market share was lost. Indeed, the Hershey 5 cent bar had become an iconic brand in the American lexicon and any change to the concept of the 5 cent bar was seen as a betrayal. It wasn't until the 1970's when a movie producer came to Mars (the market leader) to see if the company would like to have its candy product placed in a feature film that the marketplace shifted once again. You see, in this instance Mars declined the opportunity, reasoning that consumers would not appreciate their candy being linked to a movie about aliens. When Mars declined, Hershey was approached next and they jumped on the opportunity, featuring their recently developed Reese's Pieces (born of their acquisition of the candy company Reese's in the 1960's) in the movie. Of course both the alien film E.T. and the launch of this new candy were huge successes, and the marketplace saw another shift back to Hershey as market leader. In this instance, Mars miscalculated and missed an opportunity that validated a new promotion approach in the marketplace. The competition between these two companies has gone back and forth over the years, with both brands capitalizing on the mistakes and errors of the other.

The second story, perhaps somewhat bitter rather than sweet, revolves around the development of a tropical storm in the central Atlantic in August 2019 that became Hurricane Dorian. Dorian peaked as a category 5 hurricane with 185 mph winds, and on September 1st it became the biggest disaster in Bahamian history, leaving 3.4 billion dollars in damage and 70,000 people homeless in its wake. Dorian eventually dissipated two weeks later over Greenland. Important to this story, President Donald Trump tweeted on September 1st that this hurricane was likely to hit a number of U.S. states including Alabama. The National Weather Service responded to this tweet by clarifying that Alabama was actually unlikely to be hit by the storm. Doubling down on his tweeted statement, in a news conference on September 4th President Trump presented a doctored map that showed the range of the hurricane including the state of Alabama. Indeed, the map showed an extension of the storm bubble drawn with a black sharpie. The inability of President Trump to admit that he was wrong in this instance became known as #sharpiegate.

 Contrast for a moment these two instances of "being wrong". Why is it so hard to be wrong? First off, it feels waaaay better to be right than to be wrong. There is no question our survival as a species depends on us being right more often than not. At a more macro level, being wrong comes at a cost, often a lost opportunity – as evidenced in the Hershey and Mars story. At a micro level, individually, being wrong and making errors reveals social, intellectual, and/or moral failings – somewhat ironic in the case of the President Trump story shared above. Why are these attributions made? Massimo Piattelli-Palmarini, an Italian cognitive psychologist, stated that errors are made due to "Inattention, distraction, lack of interest, poor preparation, genuine stupidity, timidity, braggadocio, emotional imbalance, ideological, racial, social or chauvinistic prejudices, as well as aggressive or prevaricatory instincts." Given this, it is no surprise that people work hard to avoid being wrong! And we try to mitigate negative attributions when we are shown to be wrong (e.g., we like to say, "I was wrong, but…").

Augmenting this, people delight in finding others in the wrong (e.g., told you so, gotcha moments, etc.). This is not something new; throughout history the social cost of being wrong has been significant. No story better illustrates this than that of the explorer John Ross. In 1818, John Ross, an explorer with thirty years of sailing experience, was hired by the British Admiralty to attempt to find the Northwest Passage – a goal that had transfixed Europe for centuries. With two ships, and a plan to leverage the earlier exploration efforts of William Baffin, John Ross sought to explore the Smith, Jones, and Lancaster sounds in search of a viable pathway. It was during his final exploration of Lancaster Bay that he identified the Croker mountains through the fog. In his words: "I distinctly saw the land, round the bottom of the bay forming a chain of mountains connected with those that extended along the north and the south sides. This land appeared to be at the distance of 8 leagues…The mountains, which occupied the center, in a north and south direction, were named Croker's Mountains, after the Secretary to the Admiralty."

Upon returning to England and in his report to the Admiralty, his second in command – William Perry – refuted his account of the Croker mountains, stating that no such land form existed. Indeed, on a return voyage William Perry verified that John Ross had been wrong, the mountains truly did not exist. In fact, John Ross had been the victim of a superior mirage, often found in the Artic, whereby temperature inversion and light refraction can cause visual illusions and distance misperceptions. Unfortunately, John Ross' mistake be-

came a social spectacle and he was vilified in the press of the day. His reputation was significantly damaged, despite the other topographic, scientific, and trade contributions he had achieved on this voyage.

Given all this as storyline, where is the upside in being wrong? People have an abhorrence and fear of being wrong…and rightly so? What's the positive? One possible answer lies in a line penned by philosopher and theologian Augustine over 1600 years ago - "Fallor ergo sum" – I err, therefore I am. Indeed, I would argue that being wrong is what makes us human, and consequently there is fundamental value in being comfortable with the errors that one makes and encounters throughout one's life. In Kathryn Schulz's book "Being Wrong", the characterization of value in being wrong centers on three specific areas:

First, being wrong enables you to build compassion and empathy for others. For me, this was made clear by an experience that occurred in my first year as an associate dean at UBC. Our undergraduate students had independently organized what we call a "frosh" event here in Canada – a welcoming event at the start of the year for new students. This particular event involved the typical activities for this age group – games, cheering, drinking, etc. The students had rented school buses for transportation to the venue, and on a few of these buses frosh chants broke out. Unfortunately, a number of these chants were extremely inappropriate (i.e., misogynistic, racist) and social media quickly picked up the story. Within hours, the Dean's office at the business school was facing direct questions from mainstream media regarding the incident. As a result the students involved in the frosh event were punished, and it fell to me to work with some of the students to counsel them moving forward. Social media had been especially hard on some of these students, with people in the business community calling for them to be expelled from school, blacklisted from job opportunities in the community, and deserving of other harsh repercussions that seemed over the top to me. This was especially tough for some of the female student leadership who had not been directly involved, but had been nevertheless held responsible. I will always remember the maturity of one of these young women, who at 19 years old was able to see some value in the experience as a lesson in compassion for others. Through tears she indicated that she hoped others would not have to experience the anxiety, shame, and guilt that she had felt over the missteps that had been made. An element of wrongness had given this young woman the empathy to feel for others who might be – rightly or wrongly – so harshly accused.

Second, being wrong facilitates the learning and development so critical to maturity. This second outcome of error is quite personal to me as it represents a big turning point in my own life. You see, my background is in accounting; it was the focus of my first degree and the context of my initial working experience in the business world. However, I quickly realized this path was not for me, and before returning to academia to complete my PhD in marketing I took a gap year in the hospitality industry. A managerial position at Tony Roma's (a place for ribs) was just the ticket I needed to earn some money and recharge my batteries before facing a new academic challenge. Upon completion of my year at Tony Roma's, I thought it best to ask the general manager for a reference letter. After all, in my mind I had been a stellar manager and had thereby added real value to the organization. To my surprise, my boss, Dave Murphy, sat me down and indicated that he wouldn't be writing me a letter of recommendation because I had really been unimpressive over the duration of my employment at the restaurant. Dave related that although I was clearly intellectually sharp and scholastically accomplished, I was condescending to my colleagues and customers and lacked the work ethic that was key to success in the industry. Stunned, I real-

ized how wrong my self-evaluation was, and that I had completely miscalibrated my job performance. Even worse, there was nothing I could do at that time to rectify the situation; my error was fundamental and irreparable. This sharply painful learning experience has been the keystone in how I now look at being a responsible employee in any context. Being wrong in this instance was the best development experience I could have received.

Finally, being wrong is both fundamental and critical to science and discovery. An early story from Richard Feynman, the Nobel prize winning physicist, shows why this is true. He recounts that as a young child he and his father spent time together observing nature; his father would consequently challenge him to make predictions based on these observations. In one instance, Feynman relates that they both noticed that when birds landed after flight they would pick at their feathers. Asked to hypothesize why, young Feynman opined that the birds did this to realign the feathers that had been disrupted during flight. However, after additional observation Feynman noted that birds picked at their feathers long after finishing their flight, and thus realized he was completely wrong in his prediction. He came to understand that birds picked at their feathers to eliminate small insects that had found a home therein. Feynman notes that the experience of being wrong in such inquiry at an early age paved the way for his approach to science and discovery.

Indeed, many would contend that science in general depends on being wrong. Seminal work centered on the philosophy of science points to the strong need for falsification. Karl Popper famously asserted: "In so far as a scientific statement speaks of reality, it must be falsifiable; and in so far as it is not falsifiable, it does not speak about reality (1959, p. 316)". Thomas Kuhn's notion of paradigm articulates that normal science exists until revolution is achieved due to things that cannot be accommodated – the inability of a theory to facilitate wrongness underlies the true structure of scientific revolutions. Pessimistic Meta-Induction from the history of science (Lauden 1981) takes an extreme view, arguing that all scientific theories will be found to be wrong over time (despite the perspective of the realist view). The notion of a flat earth, a geocentric universe, existence of ether, and cold fusion have all been falsified despite being central tenets of science at one point in history. Even in anatomy, it was believed for hundreds of years that women had one fewer ribs than men (until they actually counted perhaps).

Herein lies a question I have for our field: I wonder if we are moving away from being comfortable with being wrong. We hear a lot about replication these days, and while I believe replication is a very good thing, the focus on replication seems to have created a real conversation. Certainly if the work and findings we are generating are based on fraud or poor statistical/methodological approaches, replication becomes paramount. I believe important efforts in the past decade have made us better on this front, and the beneficial changes to the integrity of our science are easy to support. However, does this conversation have unintended effects? Specifically on the value of being wrong? I have wondered about this and have observed the following:

- Articles published in the early years of the *Journal of Consumer Research* (i.e., in the 70's and 80's) were much more open about admitting error. Authors would identify that their hypotheses were wrong. This seems to have been largely lost; this openness to "being wrong" is gone.
- As an editor of the journal, I often saw members of the review team of a submitted manuscript demand the replication of effects from a previous paper if the submitted work was to move forward in the review process. The notion

that previous published work could not "be wrong" was surprising to me.

- Now that I am past-editor (residing in the Editor Old Folks home) I have been surprised that younger authors indicate to me that they feel anxiety over being wrong in their work, even when their approach seems appropriate and replication has been achieved. It seems that they are worried over potential outcomes like John Ross, and that they might be socially destroyed by those looking for wrong.

One could question - as a field - is there a danger of navel gazing here? I don't have an answer, just observations. I believe many, if not all of us have produced research that will eventually be shown to be wrong - context, population/samples, the effects of time - these are examples of factors that contribute to the potential to be wrong in our field. How comfortable are we with admitting the possibility that our work might be wrong? Interestingly, academics like Richard Muller and Richard Spitz have admitted they were wrong years after taking extreme positions in the articulation of their original theses. Most recently, it was noted that Peter Radcliffe's winning of the Nobel Prize in 2019 was an identification that the journal *Nature* was wrong in rejecting his work 27 years earlier. What is my hope? That we as a field can come to respect the value and importance of being wrong. As a good friend in the field once said to me: "As consumer behavior scientists, it is important to remember we are generative not archival", and being wrong is, in my opinion, fundamental to that viewpoint.

To finish, I would like to pull back a bit from academic musings and relate a final story. This past spring I was traveling down to Mexico City for some work on behalf of my school. Like many do, I made a gambit at the airport for an upgrade, but was informed that business class was full. The desk agent was excited to tell me that she could put me in the seat right behind business class – uh, that's still economy? The plane was indeed full and I was surprised at the heterogeneity of the passengers – people from everywhere. Next to me was a young fellow who I ascertained was likely from Korea. Most surprising was that he was wearing what appeared to me to be a fake security guard uniform – maybe that's what was fashionable with the kids today? The flight itself was uneventful, and upon landing and reaching the gate I jumped up to get my carry-on (I was in an aisle seat of course). I was surprised however when someone "rushed the aisle", knocking me right back into the seats and onto the lap of the fake Korean security guard. I popped back onto my feet and squared up, ready to get hostile with whomever had knocked me down. To my surprise it was a young female traveler who was fashionably dressed. My confrontational airs quickly deflated and I resigned myself to some muttering about queuing theory and such. As we walked towards immigration and the reception hall, I noted a number of young women, walking quickly, bumping me to the side, and generally working to get ahead at any cost. I found myself entering the "road rage" mental zone as cuts in the line continued to occur. Eventually, I had to ask – what is happening? A fellow traveler leaned over and uttered one word – K-pop. Then it hit me; I was on the plane with NCT 127 and all of the drama with other travelers was simply saesang doing what they do. I felt embarrassed for how completely wrong I had been on my attributions towards motivation. As I walked into the reception hall and saw thousands of screaming fans waiting for their pop heroes I had to chuckle at my comeuppance. I realized I get fired up waaaay too easily, and would benefit from reminding myself that I might be wrong, accepting it more quickly when I find that I am, and working harder to learn from it.

Does our society have a healthy tolerance for being wrong? Where does it sit for you - in your life, your compassion for others, your learning, and the way you approach science? I would leave you with these questions – I believe there is value in being wrong – do you?

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2019 ACR Fellow Addresses

Looking Back

William O. Bearden, University of South Carolina, USA

Good evening everyone! I am certainly happy to be here and feel very fortunate to have this experience.

As the Association for Consumer Research asserts in their statement of purpose, ACR's mission is to advance consumer research and facilitate the exchange of scholarly information among three constituencies - academia, industry, and governments world-wide. Certainly, ACR has been and continues to be successful in pursuit of that mission. Part of the work of ACR is the recognition of deserving Fellow consumer research colleagues like Linda Price and Chris Janiszewski.

First and foremost, I would like to express my sincere gratitude to ACR for being named an ACR Fellow. Obviously, I am very pleased to have received such a wonderful recognition, albeit one that certainly was not expected.

Please note that I have been retired from the University of South Carolina for a number of years. I now am spending more time playing golf, reading, and watching my grandchildren grow. As such, I am really not in a position to comment on the state of consumer research as is often done in Fellow recognition ceremonies. Therefore, my remarks will be brief and focus, first, on thanking those who have helped so much throughout my career and, second, offering a few insights from some of the lessons I have learned during my career as a professor at the University of South Carolina and as a consumer researcher like most of you attending this conference. Third, I would like to discuss an area I believe consumer researchers can help with.

To begin, I must acknowledge the inspiration that I received from my University of South Carolina colleagues, for whom I have the deepest respect and who motivated me to be better than I would have ever been otherwise. Much credit goes to my faculty colleagues and doctoral students. In particular, I would like to recognize and thank retired dear USC friends Jim Hilton, Terry Shimp, Subhash Sharma, and Jess Teel, as well as former South Carolina colleagues Rebecca Walker Reczek, Randy Rose and Joe Urbany, now at Ohio State, Tennessee and Notre Dame, respectively.

I have also had the opportunity to work closely with a number of doctoral students and to chair a number of dissertations. Some of those students are here today. While I will not take your time with providing a complete list, I would be remiss if I did not mention by name the following individuals, now all productive faculty members at their own institutions: Donnie Lichtenstein, Rick Netemeyer, Ken Manning, Pam Ellen, Kelly Hewitt, David Hardesty, Kelly Haws, Robin Soster, Stefanie Robinson, and Meredith David. Again, I learned so much from these former students and very much enjoyed and benefitted from the chance to work with each of these wonderful individuals. Obviously, I am proud of their own accomplishments and their promise for the future.

A FEW LESSONS LEARNED

To begin, many factors influence one's career – family, friends, our own universities and departments, and simple chance. In my case, my wife Patti and the USC Marketing Departmental have provided continual support throughout my career.

For young faculty and doctoral students, my experiences and observations of successful scholars suggest the following:

1) Consider carefully the competitiveness of the areas in which to focus your research, as well as your own strengths and weaknesses. For example, while analytics is now a promising area, one should consider their own analytical abilities before concentrating their research there.

2) Generally, be programmatic and focus upon a select few areas of research concentration. But, unexpected opportunities for excellent publications may arise in areas other than one's apparent interests. These opportunities should be taken advantage of, if feasible. For example, during a seminar one semester, and after reading in the seminar several articles on market orientation, I commented that a meta-analysis on the market orientation-performance relationship might be an idea worth pursuing. Ahmet Kirca, now at Michigan State, and Satish Jayachandran, a colleague from USC, with some modest help from me, pursued that idea – now one of my most cited articles (Kirca et al. 2005), but certainly far-afield from my areas of interest in consumer research.

3) It seems to me that one troublesome phenomenon in the review process that should be addressed by journal editors and associate editors is the notion of "moving targets" in terms of reviewer reactions to submitted revised manuscripts. It seems from my experience and listening to author colleagues that too frequently reviewer reactions to first revisions include sometimes new demands from reviewers of the manuscripts that might well have been raised in the first round of reviews.

4) Take time to regularly reflect on your classes and teaching. Many research-active faculty are excellent teachers. And, the impact that we as faculty can have on undergraduate and graduate students is profound. In addition, try to match your teaching with your research interests. The synergy that results can positively impact one's performance.

5) Working with doctoral students is one of our most enjoyable activities and an important responsibility as well. On occasion, you encounter instances in which inexperienced faculty expect too much from beginning doctoral students. Joint faculty-student effort involves more than just providing to the student a set of articles and then asking the students to read and then return with a publishable idea. From my experience and from observing colleagues who have worked effectively with doctoral students, personal concern for the student in all aspects of their life greatly facilitates the student's growth and their development as researchers and eventually faculty colleagues. Be patient with your students; all of us develop at varying rates.

6) Lastly, I would like to offer one broad topical suggestion for consumer researchers from my own recent experiences. Moreover, the following ideas are consistent (1) with ACR's mission statement regarding "industry" as one of our threefold emphases and (2) with transformative consumer research areas of interest (e.g., Mick 2012).

Briefly, and since my retirement, I have had the opportunity to offer some assistance to our local outreach organization, WE CARE, which supports the needy in our community Northwest of Columbia, SC. My volunteer work largely involves food assistance efforts and

obtaining damaged packaged goods (e.g., paper products, cleaning supplies, diapers, etc.) given by Wal-Mart to a United Way facility in Spartanburg, SC. The facility is part of a reverse logistics distribution process, whereby returned, damaged and unsold merchandise are processed. Many of these items are given to charities, such as WE CARE.

From my prior involvement with Stephanie Robinson's (NCS) dissertation, it is my understanding that the altruism literature has investigated extensively the motivations underlying volunteerism (e.g., Mowen and Sujan 2005). And likewise, charitable giving and donations have been investigated often by consumer researchers. But so often, the focus is on the volunteer and/or the giver, and less so on those in need. Relatedly, the coverage of poverty in general, and foodbanks and food pantries in particular, in *JCR* and *JCP* has been limited.

One in seven children regularly face hunger in the US, leaving them without access to critical sources of energy they need to learn and grow. A similar percentage of adults face the same set of challenges. Foodbanks and food pantries, all non-profit organizations, are: (1) staffed by volunteers, (2) salvage and store food that would normally go to waste, and (3) then distribute their collections to the needy. Some large foodbanks service other frontline agencies. Importantly, and thanks to the involvement of volunteers, data suggests that 98% of all donations, including both food and financial donations, go to those in need.

Overall then, it seems apparent, and as Eileen Fischer (2013) and others have argued, that consumer researchers, who are well-equipped through their methodological and theoretical training, might well address in greater depth the causes of financial deprivation, as well as activities that might assist consumers in need. In some sense, the activities of many outreach organizations, such as the thousands of food banks and food pantries within the US, reflect the efforts of "consumers helping consumers". Overall, and as Rich Lutz and others have stated in arguments for research relevance (e.g., Lutz 2018), these efforts would enhance our focus on pragmatic utility (Alba 2011).

In conclusion, as consumer researchers, we are equipped with more resources than ever before to do meaningful work and to in-teract with colleagues studying a litany of fascinating topics from different vantage points. One of my great joys in this stage of my life is being able to utilize some of my time and energy to engage in work that will help fortify the basis from which our field and society will grow: young people seeking to learn. We, as academics, have a tremendous responsibility to pass along our knowledge, experiences, and insights to the next generation of scholars and consumer researchers. Having the opportunity to help shape the futures of students, both within and outside the realm of academia, has provided me with a profound sense of satisfaction. This recognition today is a much appreciated honor, and our presence here today provides me with confidence that the future of our field is engaged, thoughtful, and in capable hands.

Thank you again!

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2019 ACR Fellow Addresses

Puzzles: Anticipating the Consequences of a Paradigm Shift in Consumer Research

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Empirical consumer research is informed by, in part, psychology. Research in psychology has been characterized by three competing paradigms[1]. *Relativism*, assumes that an investigation of lived experience (e.g., perception, meaning, feeling) depends on a personal meaning system, hence, is always subjective (Baghramian 2004, 2010). Relativists reject the assumption of universal and permanent truths and, instead, focusing on how experiences inform the behavior of individuals, social groups, societies, and cultures (Arnould and Thompson 2005). *Behaviorism* attempts to explain behavior using events in the environment, as opposed to cognitive representations and/or transformations of these events (Baum 2017). Behaviorists tend to study the environmental factors that influence the rate, intensity, and persistence of a behavior over time. *Cognitivism* assumes that environmental inputs can be represented in a mental code (i.e., information), that this code can be subjected to a series of mental transformations (i.e., processes), and that these mental processes are responsible for all behavior (Gardner 1987).

Relativism, behaviorism, and cognitivism inform present day research on consumer behavior. In my fellow address, I will focus on behaviorism. Behaviorism was the favored paradigm in psychological research from the 1920 through the 1950's. Although it has lost favor over the past 60 years, the principles of behaviorism have always been present in psychological and consumer research. In some cases, behaviorist principles have guided research on a particular topic (e.g., mimicry, habit formation, evaluative conditioning, sensory marketing, retail atmospherics). In other cases, behaviorist principles have blended with cognitivist principles to inform an approach to studying a topic (e.g., error-correction models, connectionist models, dynamic sequential choice) or theories about behavior (e.g., associative learning theory, embodied cognition, functionalist perspective on emotions). I will discuss the principles of the behaviorist paradigm, how they have manifest in prior research, and how they are likely to shape consumer research in the present and the future.

BEHAVIORISM

Over the first half of the 20th century, behaviorism became a major paradigm for psychological inquiry. The start of the behaviorist movement is credited to John Watson (1913), who observed that much of the psychological research at the time investigated mental concepts that were not directly observable. Watson rejected introspection as a valid, scientific method. Instead, Watson advocated the study of observable behavior. He argued that psychologists should "never use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery and the like." Although these concepts were well-accepted sources of human behavior, they were not verifiable sources of behavior. This put psychology at an epistemological disadvantage to the hard sciences (e.g., chemistry, physics). Watson's strategy for legitimizing psychological research was

to limit inquiries to questions that could be investigated via the direct observation of behavior, a position that was consistent with logical positivism. If a behavior could be observed, quantified, and altered, then it was worthy of scientific inquiry.

The behaviorist's approach to understanding human behavior shifted scientific emphasis in four ways. First, there was the emphasis on observable behavior. The goal was to understand how the environment shaped behavior, how behavior was reinforced, the means by which behavior could be made more intense, frequent, or persistent, as well as the means by which behavior could be dampened or extinguished. Second, there was an emphasis on the environment. Researchers wanted to know how stimuli came to cause behavior (i.e., became conditioned stimuli), what made a stimulus an effective elicitor of predictor (e.g., stimulus salience, latent inhibition), how stimuli competed to become future causes of changes in behavioral, and what moderated the influence of stimuli on responses. Third, there was an emphasis on combining small behaviors to produce complex ones, a motivation that could be traced to the desire to differentiate psychology from biology (Crowther-Heyck 1999). The goal was to understand molar, as opposed to molecular, behaviors as well as how sequences of these behaviors could be developed and/or modified. Fourth, there was a deemphasis on using mental events as explanatory variables. This is not to say that behaviorists denied the existence of thought. Instead, thought was a response that could, but often did not, serve as a stimulus in a stimulus-response-outcome triad (Skinner 1957).

Present day behaviorists vary in the extent they emphasize different parts of the stimulus → black box → behavior model. Although most non-behaviorist define behaviorism and a strict stimulus-response paradigm, only *psychological behaviorists* assume that stimuli and/or environments are the only source of behavior (i.e., there is no need to refer to an internal process). *Analytical behaviorists* accept that there may be mental processes that intervene between the stimulus and the response, but prefer to use non-mental terminology (e.g., drive, habit strength, drive reduction, homeostasis). For example, Hull (1943) allowed that there could be intervening states that did not relate to the environment (e.g., an identical environment could produce competing responses), but that these states were related to drives. *Purposive behaviorists* emphasize observable behavior, but are more relaxed about the definition of a stimulus environment (i.e., what are acceptable stimuli) and the possibility of an intervening process. For example, Tolman (1932) argued that one could infer "internal acts, states, mechanisms, processes, structures, capacities, and properties" as causes of behavior, but that one would have to set up critical tests to differentiate between the mental events (e.g., goals, mental maps, adaptation).

The Advantages of Behaviorism

There are six major strengths of the behaviorist paradigm. First, the paradigm does not need to assume an organism has an innate structure that allows it to learn (e.g., Paiget's innate schemas). There is behavior, there is feedback, and there are learned contingencies. Second, the behaviorist paradigm is dynamic. The focus is on how behavior changes over time (Miller and Frick 1949). Classical conditioning, operant conditioning, shaping, and habit formation

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are models that allow one to predict changes in the rate, intensity, and persistence of behavior. Third, the paradigm focuses on effect sizes. The goal is to understand how to facilitate positive behavior and extinguish negative behavior. The larger the change in behavior, the more relevant the intervention. Fourth, there is an emphasis on ecological validity. Environments are responsible for behavior. Changes in an environment result in changes in an effect size. Hence, understanding the characteristics of an environment that create an effect provides insight into the replicability of the effect. Fifth, the behaviorist paradigm is not constrained by theory. Most behaviorists do not consider mediating cognitive processes, thus, their research questions are not constrained by a specific theoretical perspective. One might say behaviorists are more inductive, though many would disagree because there is often is an emphasis on identifying descriptive models that predict changes in behavior over time (e.g., Janiszewski and van Osselaer 2000). Finally, the paradigm encourages a focus on substantive issues. If one is interested in behavior, then it is beneficial to study consequential behavior.

The Disadvantages of Behaviorism

There are three major weaknesses of the behaviorist paradigm. First, it is difficult for the paradigm to address complex behaviors. For example, language acquisition, problem solving, creativity, and planning, among other mental behaviors, are not easily explained by behaviorism. Second, the paradigm tends to both endorse and reject reductionism. For example, it is well documented that a social interaction is nuanced. People respond to verbal and nonverbal cues when interacting with another, thus, emphasizing the importance of the environment in verbal behavior. Yet, it is difficult for a behaviorist to predict word choice or grammatical structure (Chomsky 1957). Third, the paradigm accepts the notion of generalizability, but it is one of narrow generalization. That is, avoidance of black spiders may generalize to other spiders, but is less likely to generalize to insects, things that are black, or things that are small. To the extent stimuli/environments cause behavior, and environments and behaviors are nuanced, learning is limited to predicting relationship between a specific environment and a specific behavior. There are no constructs that allow a representative set of environments to be causally associated with a representative set of behaviors.

THE COGNITIVE REVOLUTION

The shortcomings of behaviorism were an opportunity for an alternative approach to understanding human behavior -- cognitivism. A variety of events fueled the mid-century emergence of this new paradigm. First, the development of computing machines provided a metaphor for assigning the mind a stronger causal role in behavior. First proposed by Allen Newell and Herbert Simon, and later championed by George A. Miller, the premise was that the mind could decode information into an abstract representation, manipulate it (using software), and generate responses based on the transformed information, just like a computer (see Crowther-Heyck (1999) for detailed discussion). This metaphor had three advantages. First, it allowed researchers to accommodate the relativists' claim that all experience is subjectively represented (reality is in the mind), but argue that this subjective representation is processed according set of learned rules (processing code).[2] Further, one could assume that processing code (i.e., the software of the mind) was agnostic to the information (i.e., data) subjected to the processing he code, thus, the problem of rela-

tivism is avoided (Crowther-Heyck 1999; Shannon 1948a, 1948b).[3] Second, it established an agenda that invited large participation. The goal was to identify pieces of processing code and/or understand the execution of a sequence of processing code. Cognitivism provided an opportunity to learn about attention, perception, comprehension, memory, inference, reasoning, etc. Third, it reduced the barriers to doing research. Behaviorism required a lab, staff, and the maintenance of animals. Cognitivism required paper, pencils, and access to human subjects. Conceptual and methodological skills could be taught. Thus, the computer metaphor supported efficient and inexpensive methods of data gathering.

The second factor facilitating the cognitive revolution was the work of Noam Chomsky. Chomsky investigated language acquisition and production, and area that behaviorist had a difficult time explaining (Skinner 1957). Chomsky (1959) observed that the rapid acquisition of language, as exemplified by three-to-five year-old children, could not have been learned via reinforcement. In fact, children at this age could easily create novel sentences (i.e., generative grammar). Chomsky further noted that ability to generate, improvise, and adapt language depended on innate abilities linked to modular systems in the brain. Thus, his view departed from a strict computer metaphor in that he assumed the computer code (software) was not agnostic to the type of information being processed by the code (i.e., language processing and production depended on codes that were, in part, specific to the type of information). Finally, Chomsky noted that people remember the gist of what was said, not the specific content of an utterance, suggesting that heard language was transformed into an abstract representation.

Seventy years of research have generated tens of thousands of articles that rely on the cognitivist paradigm. Common to many of the early articles is an emphasis on understanding processes in the mind. Yet, as time has passed, there has also been more investigation of the information that reemerges from these cognitive processes. Beliefs, attitudes, evaluations, judgments, choices, reasons, hedonic experience, etc. have become important topics in psychological and consumer research.

The Advantages of Cognitivism

There are three major strengths of the cognitivist paradigm. First, the cognitivist paradigm is consistent with human's beliefs about free will. Many cognitivists assume that people can control the mental processes that are responsible for behavior – executive intervention is possible. Hence, it is worthwhile to study the cognitions that are assumed to be responsible for behavior. Second, the cognitivist paradigm is adaptive. To the extent people behave in ways that are inconsistent with stated intentions, there are paradigmatic adjustments (e.g., automatic behavior, implicit learning, heuristics, non-consciously directed behavior, distraction) that can explain why a more reasoned process did not direct behavior. Third, the cognitivist paradigm provides theoretical generalizability. To the extent constructs represent the causes and effects of behavior, theories can be informative about anticipated outcomes in a variety of contexts.

The Disadvantages of Cognitivism

There are five major weaknesses of the cognitivist paradigm. First, the paradigm encourages domain-isolationism (Maxwell

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2   This relativist principle was subsequently dropped, as it interfered with the assumption that everyone in a specific experimental condition experienced equivalent content.

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3   This assumption is, in fact, not true. The transfer appropriate processing literature shows that information content and information processes provide a synergistic advantage when encountered after the initial processing occasion (Franks et al. 2000; Roediger, Gallo, and Geraci 2002).

2019). Theories and methodologies are developed with process-specific questions in mind, so that there is little overlap with related domains and little resemblance to natural behavior. Second, the paradigm is regressive (Maxwell 2019). Any serial model of stimulus representation (i.e., perception), cognitive processing (e.g., information processes), and intention (e.g., behavior selection) can be challenged because the process account is not sufficiently detailed. As process accounts become more detailed, contributions become more incremental. Third, experienced mental events (e.g., thoughts) are often uncorrelated with behavior (Wegner 2002; Wilson 2002), lag behavior (Libet 1985), misrepresent the actual sources of behavior (Nisbett and Wilson 1977), or provide no insight into the sequence of processes that are responsible for behavior – assuming such a sequence exists (Hommel 2013; van Gaal, de Lange, and Cohen 2012). Thus, the paradigm uses a methodological approach that emphasizes unreliable data (a form of process introspection). Interestingly, this implies that cognitivism has not solved the relativism trap that behaviorist tried to avoid when they rejected relativism. Fourth, it ignores a fundamental tenant of all animal behavior – that organisms are always in transition. The unit of observation should be the change in behavior over time, not the state of behavior at one time (i.e., longitudinal studies should be the norm, not the exception). Finally, cognitivism cannot address the mind-body contingency. The mind is not independent of the body any more than information is independent of information processes (Barsalou 2008; Wilson and Golonka 2013).

A PARADIGM SHIFT: BECOGNITIVISM IN CONSUMER RESEARCH

"Paradigms do not die. As new ones are born, the old ones can survive and even prosper" (Duranti 2003). Duranti's observation does not describe the initial fate of behaviorism in cognitive and social psychology, but it may describe the persistence of behaviorist principles. That is, while there has not been a resurgence of behaviorist methodology, some of the remnants of behaviorism can be seen in present-day research programs. First, research on mimicry places a strong emphasis on the replication of the behavior that is being observed *in the environment* (Chartrand and Lakin 2013). Second, the functionalist perspective on emotions posits that emotions are a motivational response to the specific *environmental* circumstances that initiated the emotion (i.e., the source of the emotion matters) (Keltner and Gross 1999; Witherington and Crichton 2007). Third, the literature on sensory marketing investigates a vast array of *environmental* and experiential factors that directly influence behavior (Peck and Childers 2008). Fourth, investigations into on-line WOM have placed a larger emphasis on the characteristics of the communications and the *consequential responses* of the receivers (Berger 2014). Fifth, research on nudges has identified a number of interventions that are valued for their *effectiveness*, as opposed to their theoretical insight (Thaler and Sunstein 2008). Finally, emerging research using big data places more emphasis on predicting *consequential consumer behavior*, and less emphasis on the reasons for relationships between predictors and predicted events (Hofacker, Malthouse, and Sultan 2016).

I would like to argue that the popularity of these domains of research represents a shift back toward three behaviorist principles. Across all research domains, there has been an *increased emphasis on actionable interventions,* an *increased emphasis on consequential behavior*, and *decreased emphasis on theoretical advancement through process explanations*. At the same time, there has been a reluctance to abandon cognitive process theory, so that research has shifted toward documenting processes that account for relationships

between actionable interventions and consequential behaviors. That is, it is sufficient to offer a process account (i.e., mediating process) that is a conceptual replication of existing theory, as opposed to an extension of a theory, as long as the account provides insight into the potential generalizability of the effects in a natural environment. I call this new paradigm beCognitivism and define it as studying the influence of the environment on behavior using cognitivist principles. That is, we seek to understand the influence of actionable interventions on consequential behaviors as explained by existing theory (see MacInnis et al. forthcoming for an alternative perspective on this trend).

The emergence of the beCognitivism in consumer research can be traced to five events. First, researchers were made aware of a problem with existing research. As discussed in Rich Lutz's 2018 fellows address, there have been calls for more relevance in consumer research dating back to 1991. Year after year, everyone thought they were doing relevant research only to learn, upon reflection, that everything they published was irrelevant (or so our thought leaders claimed). Sarcasm aside, researchers were producing incremental work, though this was likely a characteristic of the cognitivist paradigm (see above) and those who embraced it (e.g., reviewers). Second, researchers where made aware that there was an alternative paradigm. In 2005, David Mick (ACR Presidential Address) championed the Transformative Consumer Research movement. Mick created a forum for doing research that emphasized actionable interventions and meaningful consequences. Over time, a critical mass of people embraced key behaviorist principles, knowingly or not, that supported research contributions intended to make a difference in society. Third, there were nudges toward the paradigm. In John Deighton's (2007) editorial on "walking the fences" between theoretical and applied research, a plea was made for research that was more actionable. Deighton observed that experimental consumer researchers were at a resource disadvantage relative to psychologists, hence, could not excel at knowledge generation in the theory development domain. He argued that we should place more emphasis on developing non-generalizable insights at the intersection of theory and practice. Deighton encouraged authors of theory papers to add a single study that spoke to an actionable interventions and/or meaningful consequences. He also added a special *Journal of Consumer Research* issue (2008, edited by David Mick) on consumer welfare. In a later editorial (Deighton et al. 2010), he called for research that was "heavy on effects and light on theory" and, subsequently, championed these types of papers. All of these were effective nudges. Fourth, the emphasis on theoretical insights had to be relaxed among gate-keepers. Although Deighton and co-editors had pushed for this change, reviewers and ERB members were predictably slow to embrace the change. That is, papers that used an actionable intervention and measured a consequential behavior were at a disadvantage to traditional, cognitivist papers because the beCognitivist papers naturally emphasized external validity over internal validity and/or theory advancement. This problem was addressed in fall, 2015 when the Dhal, Fisher, Johar, Morwitz team of JCR editors began to consider, and eventually publish, papers that had actionable interventions and consequential outcomes. These theory application papers demonstrated how consumer research could make a difference in society and that theoretical advances were not the only route to knowledge creation in consumer research. Accordingly, an effort was made to develop, and enforce, evaluation criteria that emphasized societal impact and theoretical insight, without requiring theoretical advancement. Finally, incentive systems were aligned with the new paradigm. The Campbell, Kirmani, Inman, Price JCR editorial team has used editorial feedback to encourage papers that

are consistent with behavioral principles. I note that their editorial emphasis is aligned with the *Journal of Marketing* and the *Journal of Marketing Research*, which are also encouraging beCognitivist research. As an aside, my perception is that *Journal of Consumer Psychology* remains open to both cognitivist and beCognitivist research.

The renewed emphasis on the key behavioral principles of (1) actionable interventions, (2) consequential behavior, and (3) theory application (as opposed to theory development) is shifting our research focus from theory building to the generation of actionable knowledge. This has implications for how we will evaluate future knowledge contributions. To illustrate why this is the case, let's compare and contrast the foci of cognitivist and beCognitivist consumer research in the present day.

1. *An emphasis on theory development (cognitivism) vs. an emphasis on behavioral impact (beCogntivism).* Cognitivist researchers try to advance existing theory. The most common implementation in consumer research is to adopt a theory from cognitive or social psychology, add a previously undocumented mediating process, identify a moderator that determines when the new process versus a previously established process is more likely to have an impact, and show the differential influence of these two mediating process on downstream behaviors (i.e., constructs). BeCognitivist researchers try to demonstrate how to make a meaningful difference in a managerial, social, or consumer domain. The most common implementation in consumer research is to find an important behavior (e.g., eating, health behavior, on-line behavior, recycling, donation behavior, addictive behavior, financial decision making, medical decision making) and isolate interventions that can influence this behavior. Secondary data, field studies, and consequential lab behaviors can be used to bolster claims that the research demonstrates how to impact an important consumer behavior.

2. *An emphasis on constructs (cognitivism) vs. an emphasis on interventions (beCogntivism).* Cognitivist researchers manipulate constructs, or measure constructs, so findings can be generalized to out-of-domain contexts. To illustrate, consider the effort invested in guaranteeing construct validity. Authors are careful about defining constructs, and using established manipulations and measures, so that claims about theory are internally valid. BeCognitivist researchers identify interventions that result in meaningful changes in consequential behavior. When the goal is to change a behavior, it is often advantageous to find an intervention that is strong and actionable, even if the intervention represents multiple constructs. To the extent the goal is to alter behavior, not develop theory, this emphasis is appropriate. I would further argue that the more representative the intervention, and consequential the behavior, the less important it is that the intervention be directly tied to any one construct.

3. *An emphasis on internal validity (cognitivism) vs. an emphasis on generalizability (beCogntivism).* Cognitivist researchers strive to identify relationships between constructs. Internal validity is critical to any claimed relationship between the constructs. This necessitates a careful construction of procedures. It also requires that alternative explanations be addressed. BeCognitivist researchers strive to identify relationships between actionable interventions and consequential behaviors. An implicit assumption of this paradigm is that all meaningful behaviors are multiply-determined. Thus, the objective is not to rule in an explanation and rule out all other competing explanations. Instead, the goal is to document an explanation that may provide predictive insight.

4. *An emphasis on mediation (cognitivism) vs. an emphasis on moderation (beCogntivism).* Cognitivist researchers strive to understand why. They focus on theory development and hold the belief that a more developed theory will provide more predictive insights into more contexts. BeCognitivist researchers acknowledge that it is important to understand why, but note that it is often more important to understand when and where. They focus on theory application and hold the belief that there are contextual factors that facilitate or inhibit relationships between interventions and behaviors. An actionable intervention is a useful tool and the goal is to understand when and where the tool will be useful.

5. *An emphasis on directional effects (cognitivism) vs. effect size (beCogntivism).* Cognitivist researchers strive to understand directional relationships between constructs: "an increase in construct A will lead to an increase in construct B." In this context, concerns about replicability relate to whether or not the relationship between the constructs holds across repeated tests of the hypothesis. BeCognitivist researchers strive to identify successful interventions. In this context, concerns about replicability relate to whether or not an intervention will produce the same effect size across repeated tests of the hypothesis (see Nelson, Simmons, and Simonsohn (2018) for discussion). These differences in philosophy are related to a differential preference for understanding construct relationships (i.e., theory development) versus identifying variable relationships (i.e., theory application).

My discussion of the differences between cognitivism and beCognitivism are broad, coarse, and extreme. There are few researchers that claim to support all of the beCognitivist positions I have stated, especially given that the large majority of empirical consumer behavior researchers were trained in the cognitivist tradition. Yet, my observations do not come from my imagination. In the past three years, I have seen subsets of these beCognitivist views expressed in reviews, AE reports, and Editor decision letters. Further, I am seeing them with increasing frequency.

Independent of the review process, there are pieces of evidence that are consistent with the idea that we are in a paradigm shift toward beCognitivist research. First, consider the shift in topics studied by information processing researchers over the past 10 years. In the 2008 issues of the *Journal of Consumer Research*, researchers largely investigated mental events: beliefs, evaluations, intentions, judgments, experiences, scenario-based choices, etc. In fact, only three papers (out of the 58 non-Consumer Culture Thoery papers), approximately 5%, measured a consequential behavior (e.g., a consequential choice, food consumption). In contrast, in the 2018 issues of the *Journal of Consumer Research*, nine papers included a study with a consequential choice and 12 additional papers had a study with a consequential behavior (e.g., tipping in a restaurant, cheating, donation amount, menu choices in a restaurant, gambling, food consumption, WOM – tweeting, product purchasing). This represented 34% of the 61 non-CCT papers. This reflects a broader shift toward the investigation of consequential behaviors (e.g., physical consumption, financial decision making, social influence, socially responsible behaviors). This shift will continue as more emphasis is placed on resource usage, product disposal and reuse, interactions with technology, online search and viewing behavior, and online communications (e.g., Facebook, Twitter, Snapchat). Calls for more socially consequential work (e.g., MacInnis et al. forthcoming) will further accelerate this paradigm shift.

THE CONSEQUENCES OF A PARADIGM SHIFT

It is difficult to predict the end-state of a paradigm shift. Paradigm shifts are social phenomena that move at various speeds, owing to environmental nudges, but will move none-the-less. Yet, if the paradigm shift has just begun, then it is likely that we will experience considerably more disruption before a steady state is reached. If this is the case, I can offer predictions about where the field of consumer research will be 10 years from now. I offer these predictions not because I advocate these outcomes – my advocacy, or lack thereof, is irrelevant. Instead, I want to encourage mentors and students to make their own assessment about the expected state of consumer research five and ten years from now. I encourage everyone to have a conversation, and sharing their conclusions with their colleagues, so we are in agreement (or disagreement) about the future of the field. With that goal in mind, I offer some observations that can start the conversation.

1. *Consumer research will become more inductive.* To the extent beCognitivism encourages nudge-like studies, a researcher can deduce an effective nudge from theory or induce an effective nudge from observing a single case in the environment. I expect that observation and inductive reasoning will become an important source of ideas on how to create actionable interventions. These approaches will prove fruitful because they will take advantage of the fact that multi-causal interventions create larger influences on consequential behavior. The only advantage a cognitivist will have is the ability to combine theories to deduce an intervention that could integrate the effects of multiple causal constructs. Of course, this approach to science would be inconsistent with training of the cognitivist. That being said, case studies will provide a lower risk approach to understanding how to develop successful interventions.

2. *Secondary data, quasi-experiments, and field studies will lead contributions, whereas lab studies will support an explanation.* An increasing emphasis on actionable interventions and consequential behaviors will force researchers into research environments where both behaviorist principles can be concurrently achieved. Consequential behaviors can be observed in a lab, or with an online sample, but actionable interventions are difficult to implement in a lab unless the domain of research is ubiquitous (e.g., technology usage). I anticipate that researchers will have to document the importance of a research question, and the potential impact of their intervention, prior to offering an insightful explanation. The importance of the explanation for the relationship between the intervention and the consequential behavior will be negatively correlated with the generalizability of the effect across applied domains. Thus, as we begin to focus on applying theory to important managerial, social, and lifestyle issues, it will become less important to document that a theory was instrumental to the observation. Lab studies have the potential to lose relevance in these types of knowledge contributions.

3. *Consumer research will become more egalitarian.* In the same way the cognitive revolution reduced barriers to entry (into the knowledge creation industry) relative to behaviorism, a shift to the beCognitivist paradigm will reduce barriers to entry relative to the cognitivism (see van Osselaer and Lim 2019 for an alternative perspective on barriers to entry). The two biggest barriers to entry in the cognitivist paradigm are the conceptual and the methodological skills associated with theory development. Traditionally, these skills were taught in top Ph.D. programs, through coursework and intensive mentoring. Students who did not have access to this training were blocked from making

contributions to top-tier journals. In contrast, beCognitivism requires that a person be able to observe the environment and understand basic influences on human behavior. The necessary skills for a beCognitivist researcher will consist of some combination of data scraping skills, data compilation skills, big data analysis skills, and project management skills (needed to run one-factor quasi-experiments and field studies) as well as an understanding of many of the methods that have supported CCT research over the past 40 years. The emphasis will be more on intervention implementation and testing, and less on theoretical development and advancement.

4. *Ph.D. students will be recruited for a different skill set.* Top Ph.D. programs have often recruited students because of their skills in conceptual thought, deductive reasoning, experimental design, and multivariate data analysis. A movement toward beCognitivist research will place more emphasis on applicants' substantive interests, industry research experience, business networks, project management skills, and salesmanship (MacInnis et al. forthcoming). People with these characteristics will be better able to accumulate and configure the resources needed to investigate actionable interventions at a local or national level. People with these skill sets will move our field closer to addressing social issues like poverty, inequality, climate change, etc. To the extent these are the goals shared by a majority of consumer researchers, the time for our educational interventions is now.

SUMMARY

Consumer research is in the midst of a paradigm shift. Ten years ago, over 90% of published, experimental consumer behavior research concerned theory development. In 2019, my impression is that approximately half of published, experimental consumer research will advance theory, with the remainder having a more applied focus. Ten years from now, there is a strong possibility that theory development papers will be absent from the consumer research journals. If this is the intent of the journal policy boards, then it would be useful to openly state this policy shift. It will help students and junior faculty make decisions about how to allocate their resources. If this is not the intent of policy boards, then it would be useful to set guidelines for how theory development and theory application research should be uniquely valued. It is unfair to reject a theorist's contribution because the research used literature-based, and verified, manipulations and measures of constructs (i.e., did not have actionable interventions and/or consequential outcomes). It is also unfair to reject an applied researcher's contribution because the research failed to make a theoretical advance, even though it documents, conceptualizes, or addresses an important consumer, societal, or global problem. In the end, a paradigm shift should introduce a new approach to making a knowledge contribution, but it should not extinguish the old way of making a contribution. The history of our field shows there are many approaches to making a knowledge contribution.

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2019 ACR Fellow Addresses

The Fellowship and The Quest

Linda L. Price, University of Oregon, USA

I'm deeply humbled and honored to be named an ACR Fellow. Those of you who were at the ACR luncheon table with me last year know I was astonished to learn I had been named. Many of you out there in the audience may still be astonished that I was named! Let me clarify that I could not possibly be a bigger fan of the research I've done—each and every research journey I undertake seems destined to change the world and make it a better place (at least in my mind). And, I haven't given up on any of them (published or unpublished)—as my mother used to say "Hope springs eternal." I still think it's only a matter of time before everyone realizes how interesting and important they are. And it's a really good thing I feel this way, because I spend literally years on each and every one of them.

Being named a Fellow, however, highlights for me, it's never a fellow, it's always a fellowship. Each and every one of my research projects has a story, and the story is quite similar—there's a fellowship and a quest. As I say this, at least some of you are likely to nod your heads in agreement that your research stories are like that too. So, I'm not saying something new or profound, but I want to focus on both parts of this narrative, the fellowship and the quest, because I think they often get backgrounded in how we describe the research process—sometimes to our students, and sometimes to ourselves.

I'm going to begin by describing what I mean by a fellowship and a quest. Then I'm going to conclude by describing how they come together to shape the research process and outcomes. I hope a modest take away is that when you are recruiting and working with PhD students, choosing and doing your research, reporting and talking about why and how you did what you did, you might reflect a bit more on the wonderful gift of these two things.

THE FELLOWSHIP

My brothers, I see in your eyes the same fear that would take the heart of me. A day may come when the courage of men fails, when we forsake our friends and break all bonds of fellowship, but it is not this day…This day we fight!! J.R.R. Tolkien

It's not surprising that I would focus at least part of my talk on fellowship since much of my research career has emphasized not the individual actor, but the collective; not my identity, but ours; not me, but us and our relationships with each other as citizens in a global world (Epp and Price 2008; Epp and Price 2010; Epp, Schau and Price 2014; Strizhakova, Coulter and Price 2008; Thomas, Price and Schau 2013). When I'm studying consumers' possessions, I'm most interested in how possessions are assembled into and affect people's relationships with each other (Epp and Price 2010; Curasi, Price and Arnould 2004). When I'm studying markets, I'm most interested in how they are shaped and shape people's interactions (Price and Arnould 1999; Arnould and Price 1993; Feick and Price 1987). When I study brands, I'm interested in how consumers' most important loyalties (which almost never include brands) affects their brand choices and use (Price 2015). When I look at service touch-points in the customer journey, I imagine that customer to be a family on a collective journey, with complex identity goals (Epp and Price 2011; Epp and Price 2018; Thomas, Epp and Price 2019).

Naturally, as I reflect back on my research career (something that I suspect inevitably happens when given this honor) I see all the amazing, fruitful, and happenstance fellowships that comprise those research journeys. Also, it's perhaps not surprising that on the 50th anniversary of the *Association of Consumer Research*, I am drawn to thinking about fellowship since this association has been a vibrant partner in each and every one of my research journeys. As I look across this room I see many fellow travelers.

There's been a lot of work on research collaborations, what they are, how they impact productivity and how to create, find or enhance successful ones (c.f. Bammer 2008; Lee and Bozeman 2005; Katz and Martin 1997). Research collaborations are one important way of thinking about fellow travelers. I won't pretend to have a comprehensive grasp on that literature, but will say that, in general, research collaborations are increasing and increasingly important for addressing major social, environmental and technical problems, and successful ones are still not that common. Many, if not most research universities, including my own, have major initiatives in place to encourage successful research collaborations particularly in quests of solutions to vexing problems.

The more encompassing term of fellowship has a simple definition. For example, the Cambridge Dictionary defines fellowship as "people with the same purpose, experience, or interest, or a formal organization of these people," noting "Fellowship is also a friendly feeling that exists between people who have a shared interest or do something as a group." Nevertheless, in our daily lives we know that fellowship is difficult, complicated, ephemeral and dynamic. Sometimes we gather together in pursuit of a shared goal and it feels in our bones like a fellowship, and sometimes it does not. Like so many other prized emotions and experiences, we have trouble providing the formula for a fellowship, and yet "we know it when we see it." As I was trying to articulate in words, what exactly makes a good fellowship, I ran across an interview with Tom Reilly program director for Ted Fellows, who described what he looks for in a Ted Fellow (Eng 2014):

> I'll take a stab at it: intellectual, energetic, social and emotional fluency. Pick at least two or three. Add a porous-membrane attitude to collaboration, genuine optimism and a love for playing idea-jazz alone and in bands.

At least in research fellowships these qualities seem like a pretty good start on a recipe, and I bet all of us feel that ACR is a fellowship that enables us to "play idea-jazz in bands." But we also know that fellowship means we take turns taking out the garbage, make sure we proof-read everything until our brains are numb, and make sure it's not just talk, even if the talk sounds brilliant. Daniel Kahneman has spoken compellingly about research fellowships, observing of his long-time and fruitful collaboration with Amos Tversky:

> One consequence of this mode of work was that all our ideas were jointly owned. Our interactions were so frequent and so intense that there was never much point in distinguishing between the discussions that primed an idea, the act of uttering it, and the subsequent elaboration of it (Kahneman 2003; 724).

He goes on to write, "Amos and I shared the wonder of together owning a goose that could lay golden eggs—a joint mind that was better than our separate minds," Most important he writes of the excitement, the fun, the laughter, even positing that because of Amos he became funny and "the result was that we could spend hours of solid work in continuous mirth," (723). As someone who has experienced this kind of collaborative work with many of my fellow travelers it is magical, "solid work in continuous mirth," could not be a better description. My own lovely fellowships add in lots of spices, spontaneity and adventure—and very often a beach, river or mountain. Nevertheless, just like any other collective, to be effective, research fellowships have to harness heterogeneity, create and navigate flexible connectedness, and regularly support their collective goals, despite many competing priorities (Price and Epp 2015; Thomas, Epp and Price 2019; Thomas, Price and Schau 2013).

I want to emphasize that I define the fellowship of a particular research journey as including not only that inner circle of research collaborators whose names often go on the related publications, but also the many others who inform, support and direct the quest. Many of you in this room have served this role providing directions, offering fellowship, support and traveling along side. These unacknowledged fellow travelers can have a central role in how a journey unfolds. To understand how and why we have to talk about the quest.

THE QUEST

"Say it, reader. Say the word 'quest' out loud. It is an extraordinary word, isn't it? So small and yet so full of wonder, so full of hope."
–Kate DiCamillo

The quest is the most important part of research. Cambridge dictionary defines a quest as "a long search for something that is difficult to find." When you go on a quest, there's a sense that it will require risk, skill, stamina and vigor; you can't predict where it will take you or what lies ahead; there will be obstacles; and when you complete the quest you will have found something important that will benefit not just you, but others as well. Such long and arduous journeys almost always involve fellow travelers. They are initiated in a variety of ways and for a variety of reasons. We have wonderful examples in our field of these kinds of arduous journeys: long and arduous quests to improve consumers' health and wellbeing (c.f., Mick et al 2012; Pechmann and Knight 2002; Zhao and Pechmann 2007); a long and arduous quest to improve the lives of cancer patients and their families as they interact with service systems (c.f., Berry, Dalwadi and Jacobson 2016; Danaher et al 2017), long and arduous quests to improve individuals' financial journeys (c.f., Fernandes, Lynch, and Netemeyer 2014; Lynch 2011; Lynch et al 2009), and a life-long quest to do "action-oriented programs of research aimed at improving society and the lives of consumers" (c.f., Murray, Ozanne, Shapiro 1994, p. 559; Ozanne and Saatcioglu 2008; Ozanne et al 2017). Of course, there are lots of other examples in this room right now of these types of arduous quests. These examples feel like "holy grail" quests, but quests come in all shapes and sizes.

Over years of serving on University P&T and University Graduate Councils I have had a chance to review a lot of research that involves fruit flies. I thought, "What would it be like to spend your life studying fruit flies?" Of course, these researchers weren't studying fruit flies, they were on grand quests to understand genetics, recover habitats, save species, and cure diseases. At the heart of their research are burning questions that give this tiny organism a giant role in scientific research (c.f., Cohen 1995; Prokop 2016). At least five Nobel prizes have come from studying these irritating little critters that inevitably end up in your wine glass on a summer night. These flies are studied so fruitfully exactly because they are a teeny, tiny convenient example of so many important things.

I'm currently reading a memoir by Hope Jahren, a paleobiologist, entitled *Lab Girl*. I should confess when I say "currently reading," what I mean is I pick at it, highlight particular passages throughout, put it under my pillow and hope to actually read all the way through it soon. The author has a great Prologue, which I promise will suck you into the whole book. She is on a long and arduous quest to save trees and forests. She asks us to care that more than one trillion leaves are being ripped from their source of nourishment every single day. She asks us to care about the deaths of those leaves. Then, Professor Jahren asks us to focus our gaze on just one leaf, reflecting "People don't know how to make a leaf, but they know how to destroy one." She encourages us to ask a question about our leaf. The most important part comes next! When we do that, when we begin to ask a burning question of that leaf that caught our gaze, we are a scientist. It may help to know math, or physics or chemistry (or in our field psychology, sociology, anthropology, economics, statistics). However, the essential feature of a good scientist is a burning question. In fairness, Professor Jahren says "what comes first is a question, and you're already there," (4). She doesn't explicitly say it has to be a burning question, but I think if you are going to undertake a long and arduous quest then it needs to be a burning question. Let me briefly answer two important things you might be asking, "What is a burning question?" and "How do I find one?" Of course, I realize that some of you are simply asking "When will this be over?"

What Is a Burning Question?

A burning question can be one that many people share, something that if we knew the answer would make a big difference to a lot of people in their beliefs, behaviors, and outcomes. It could be what keeps a lot of people awake at night. Those "holy grail" quests I described earlier seem like this. Jerry Zaltman, a significant mentor for me and many others in this room, always encourages us to ask, "how many people will change what they are doing by how much, if you answer this research question?" Specifically, "An interesting idea is one that, if it were 'true', would require a large number of people to undertake a substantial change in their beliefs or behaviors (Zaltman, LeMasters, Heffring 1982).

However, burning questions can also be something that if you knew the answer would make a big difference in your beliefs, behaviors, and outcomes. That is, a burning question can be something firmly rooted in your own life, something that keeps you awake at night. Most of my burning questions are quite personal, rooted in my own experiences. For example, triggered by the birth of my son I went on a multi-year journey with fellow travelers to understand family identity and consumption. How do families create and maintain heirlooms (Price, Arnould, and Curasi 2000; Curasi, Price and Arnould 2004)? What is family stuff (Price 2013)? How do objects and technologies enter our households and disrupt our identity and practices (Epp and Price 2010)? How are multiple identity goals (sometimes painfully) navigated on a family vacation (Epp and Price 2011)? How does technology mediate family practices (Epp et al 2014)? Each of these was triggered by a specific observation in my own life. Since I'm not so different from a lot of other people, it turns out my burning questions are generally shared by many fellow travelers as well. Fellowships are made up of the people who share your quest. You'll have a chance to hear some of my fellow travelers (Matt Godfrey, Kivalina Grove and Nate Warren) present some of our recent burning questions during this ACR conference (Godfrey and Price 2019; Grove and Price 2019; Warren and Price 2019). And I'll be back next year and the years after with more of them.

How to Find a Burning Question

Significantly, burning questions rarely come from observing thousands of data points—although a burning question can easily send us on a quest to observe or collect sheaves of data. Rather, burning questions often come from the careful observation of just one thing—a person, an event, an experience, an object, a story—a single leaf, or a chance encounter with a total stranger (Gladwell 2019). They are often formulated around an N of 1, that then draw our gaze to many other instances and the importance of that observation. They are our interpretation of that one thing, from our particular perspective. They can make us feel as if we have opened a door and walked through it to an entirely different possible world, one that doesn't behave as we expected and leaves us confused, disturbed, unsettled—believing there is something very important about this observation that we just don't get. In a fabulous chapter on designing a program of research, social-psychologist Susan Fiske describes an early burning question. Moving to Boston for college she describes:

> I was struck by an absence that took me awhile to place. Although there was the right amount of fluffy white stuff, the people were far too white. The lack of ethnic variety in the Boston I encountered—the result of heavy de facto segregation—seemed odd to me. Probably primed by my mother's interest in communities, I couldn't figure out why people would want to live that way. Probably primed by my father's orientation to research, I realized there must be empirical answers, (Fiske, 2004, 71).

Virtually all my research journeys look exactly like this. They began with a single observation that seems very confusing and at odds with how I think the world works, and I believe there are empirical answers. Quite often the specific observation never appears in the published work, but nonetheless plays a central role in the research journey. Because these doors into possible worlds are not written into the research process, we may neglect how vitally important they are (Bruner 2009). We may neglect to tell our students that it is finding these doors, opening them, and walking though that is the most important part of all. These doors are portals that take us between now and then, between what and what if, they transfigure and transform us (Price and Price 2019). As architect Simon Unwin marks,

> where the power of the wall is to deny (to keep things apart), that of the doorway is to permit (to allow passage). And permission usually has more dimensions of possibility—risk as well as rewards—than denial," (Unwin 2009, p. 3).

Karl Weick writes about these possible worlds: "When people imagine reality, they start with some tangible clue and then discover or invent a world in which that clue is meaningful," (1731), but he warns us that to walk through these doors into a possible world requires simultaneous believing and doubting. "Faith involves a full intensity of commitment to action but doubt fine tunes that faith by differentiating things known from things not known," (Weick, 2006, 1730).

HOW THE FELLOWSHIP AND THE QUEST TOGETHER SHAPE THE RESEARCH PROCESS

I want to conclude my comments by talking about how the fellowship and the quest come together to shape the research process. To set the stage for that conclusion, I want you to recall the wonderful Dr. Suess story of "Horton Hears a Who." In case you need something to trigger that memory, I brought the book. Much of what I have already suggested is eloquently unfolded in this quintessential ethnography. In this story, you just have to insert for Horton the elephant, the collective of the fellowship, the fellowship of people who believe that there's a possible world living on a speck of dust and if you listen very carefully you will uncover this possible world. The informant of this world will play a role too—if you start to listen they will rally and yell. They'll tell you their story—because "A person's a person. No matter how small." And, there will be surprises and empirical demands—you'll ask that mayor to call out all hands and make sure you can prove that Who's in Who Ville are really there, you'll make sure you get everyone out and everyone's there. And the end of the story, as we like to recall, is the Who's in Who Ville were saved by "the smallest of all." Ever after the big kangaroo said she was planning to help save them and the young kangaroo in her pouch said…me too.

I have been extraordinarily lucky because I have found many fellow travelers to pursue possible worlds on a speck of dust. I mention only a few here. Larry Feick was willing to go on a multi-year search to find out if there were more people like Mark Alpert (that wonderful but bewildering person we later called a Market Maven) (Feick and Price 1987). Eric Arnould, with a single phone call from a near stranger was happy to undertake a multi-year study of how a bunch of bad things adds up to consumer delight (Arnould and Price 1993), how service providers manage these kinds of extended service encounters (Price, Arnould and Tierney 1993), and how commercial friendships emerge and their consequences (Price and Arnould 1999). One burning question after another emerged from a single day rafting trip years before I ever met Eric that left me bewildered about why my companions thought that was "so much fun" and "we should do it again." Amber Epp, Tandy Thomas, Hope Schau and I are figuratively fellow travelers forever in our quests to understand our families and our tribes—what holds us together, what pulls us apart? It is an engaging and dynamic quest that changes with each new twist and turn in our respective family journeys. For example, Tandy and Amber, both parents of young children, recently published an engaging multi-year study of why and how carefully envisioned new parenting practices are not what actually happens, aptly titled, "Best Laid Plans," (Thomas and Epp, 2019). I suspect our collective journey to understand our collectives will never end. Robin Coulter has now been on so many perilous and arduous quests with me that she deserves sainthood. Our most recent quest to understand how a fresh start mindset shapes consumer consequences began when I was about to go on sabbatical in 2013, desperate for a fresh start. On a hike through Sabino Canyon in Tucson Arizona, we began our quest and have gathered fellow travelers. We are still questing, and still inviting fellow travelers (but see, Price et al 2018).

My fellow travelers have brought an equal bounty of belief and doubt. They have had my back, and never let me get away with anything. They have been as invested in the quest as I am. They too love the question much more than any particular answer. They believe that what we find can change their lives and others. They have a complement of skills and tools, but also solid empirical rules. As Dr. Suess might coin, they have followed me out "to the three millionth flower, searching and searching hour after hour." Through thick and thin they have made me better. All the storms they've helped me weather.

When I wish for you the greatest of things—and I do, I wish that you might have these two things—a fellowship and a quest.

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Special Session Summaries

The Emotional Consumer: Insights from Big Data

Chairs: Matthew D. Rocklage, Northeastern University, USA
Jonah Berger, University of Pennsylvania, USA

Paper #1: What Leads to Longer Reads? Psychological Drivers of Reading Online Content

Jonah Berger, University of Pennsylvania, USA
Wendy W. Moe, University of Maryland, USA
David A. Schweidel, Emory University, USA

Paper #2: The Enhancing vs. Backfiring Effects of Emotionality in Consumer Reviews

Matthew D. Rocklage, Northeastern University, USA
Russell H. Fazio, Ohio State University, USA

Paper #3: Managing Online Venting: The Impact of Temporal Distance on the Perception of Negative Online Reviews

Lauren Grewal, Dartmouth College, USA
Andrew T. Stephen, University of Oxford, USA
Yakov Bart, Northeastern University, USA

Paper #4: Engaging Your Audience on Social Media: An Application to Politics

David A. Schweidel, Emory University, USA
Beth L. Fossen, Indiana University, USA

SESSION OVERVIEW

From the excitement of iPhone launches to the uproar over Nike's Colin Kaepernick campaign, emotions have a huge impact on attitudes and action. Indeed, decades of consumer behavior research has scrutinized emotion and its effects.

But to truly deepen wisdom in this area, research must move beyond the confines of the lab. How can researchers measure emotion in the field? And how can we better understand emotion's impact in noisy real-world environments?

This session integrates four papers using diverse text analytic approaches to shed light on these questions. How do emotions evoked by online content shape reading? Can expressing positive emotion actually decrease others' purchase intent? Does venting about an experience really hurt businesses? And which emotions expressed by politicians generate engagement? This session answers these and other questions as it deepens our understanding of the emotional consumer in the wild.

Examining over 35,000 articles, **Berger, Moe, and Schweidel** examine how emotions shape reading. Using natural language processing they demonstrate that the effects are more complex than mere emotionality or valence alone. Instead, specific emotions have differing effects. Evoking anger and anxiety encourage further reading whereas sadness discourages it. Directly manipulating these emotions in an experiment underscores their causal impact and highlights the underlying role of uncertainty and arousal in driving these effects.

Analyzing over 100,000 Amazon reviews and three in-lab experiments, **Rocklage and Fazio** investigate whether positive emotion can backfire in online reviews. For product owners, positive emotion is consistently linked to higher star ratings. When expressed to others, however, this same positive emotion backfires and decreases purchase intent for utilitarian products. Readers mistrust emotional reviews given the product's unemotional nature. Consequently, these

reviews are also less likely spread because they often do not reach the product's front page on Amazon.

Grewal, Stephen, and Bart use 1.67 million online hotel reviews and five experiments to investigate when consumers vent negative opinions and when these opinions are harmful versus harmless. They find that consumers express greater negativity the more recent their hotel stay, but that these proximally-written reviews tend to be discounted by readers. Readers see the reviewer as less rational and therefore give that review less weight.

Schweidel and Fossen analyze 30,000 Twitter posts from U.S. senators to examine the effect of emotional language on multiple metrics of online engagement. Anger in particular predicts greater impact: it results in more retweets and replies and also predicts increases in the number of new followers the senator attracts. This effect is particularly strong when predicting new followers in states with greater partisanship. Sadness, disgust, surprise, and trust also play important roles.

Taken together, these papers create new wisdom on the measurement and impact of emotion in the wild. In addition to researchers studying emotion, online reviews, and text analysis, this session should draw those studying word of mouth, attitudes, digital behavior, and consumer engagement. Moreover, the unique datasets and text analysis approaches used should help expand researchers' repertoire of data sources and methodologies.

What Leads to Longer Reads? Psychological Drivers of Reading Online Content

EXTENDED ABSTRACT

More and more consumers read content online. They scan *Wall Street Journal* articles, and peruse blogs on tech and celebrity gossip. But sometimes people only read a sentence or two before navigating to something else and other times they read a full article. What makes one article more engaging than another? That is, what about certain articles encourage people to keep reading?

This paper investigates how content characteristics shape continued engagement. We combine an experiment with natural language processing of a unique dataset of over 825,000 reading sessions from nine major online publishers. This data allows us to examine, for a given person reading a given article, how textual features of a given paragraph (i.e., the words used) shape whether someone keeps reading.

We make two main predictions. The first, more intuitively, the easier text is to process, the more likely people will continue reading. We measure processing ease both through standard textual complexity measures (i.e., Flesch-Kincaid readability index and syntactic complexity) and word familiarity and concreteness. More familiar words should be easier to process and concrete things tend to be easier to visualize or imagine, which should make processing easier and encourage reading.

Second, we examine how emotions evoked affect reading. The most basic possibility is that emotionality, or sheer amount of emotion, impacts reading. A second possibility is that valence drives

reading: positive things encourage reading and negative things discourage it, or vice-versa.

In contrast, we suggest a third possibility: different specific emotions (measured through NRC) will have different effects on reading based on their associated appraisal and action tendencies. Specifically, we suggest that effects will depend on how specific emotions shape uncertainty and arousal. Uncertainty involves not knowing or not being sure about something. While certain emotions (e.g., anger) tend to be characterized by certainty, others (e.g., anxiety or fear) tend to be characterized by uncertainty (Lerner and Keltner 2001). Uncertainty, in turn, increases attention and information search as people try to resolve predictions about what will happen next (Tiedens and Linton 2001). Taken to the context of reading, we suggest that emotions associated with uncertainty (e.g., anxiety and sadness) should encourage reading.

Beyond uncertainty, emotions are also characterized by differences in arousal. Arousal is a state of being physiologically alert and attentive. While some emotions (anger and anxiety) are characterized by high arousal, others (sadness) are characterized by low arousal. Emotionally arousing stimuli attract attention (see Mather, 2007 for a review). Taken to the content of reading, we suggest that emotions characterized by high arousal (e.g., anger and anxiety) should encourage people to continue reading.

We test these predictions in both the field and lab.

Field Data

We use natural language processing to analyze over 825,000 page read events from over 35,000 online articles. We worked with a major content intelligence company that tracks reader engagement for online publishers. For the last two weeks of October 2014, they provided a representative random sample of page-read events from nine popular online news sites (e.g., CNBC, ESPN, Wall Street Journal, and Jezebel).

Space constraints restrict full description the data, but for each page-read event we know how far down the article someone read and the text of the article before that. We include various controls (e.g., publisher, reading device, and article topics [using LDA for topic model controls]) to try to rule out selection concerns (e.g., certain types of people tend to read certain types of articles or at certain times). That said, one could still argue that some unobserved feature is driving engagement. To address this concern, we use article-level content features as a control. Thus, we examine whether controlling for all other observable aspects of an article, how the text of each paragraph relates to whether a user continues to read into the next paragraph. Even controlling for anxiety evoked by the rest of the article, for example, whether paragraphs that evoke more anxiety still increase reading.

Results

First, as predicted, emotion shapes reading, but the pattern is more complex than emotionality or valence alone. People are more likely to continue reading after paragraphs that evoke more anxiety or anger. They are *less* likely to continue reading, however, after paragraphs that evoke more sadness.

Further, consistent with our theorizing, people were more likely to continue reading after paragraphs that evoked greater arousal or used less certain or more tentative language.

Second, as predicted, a range of content features that should boost processing ease are linked to continued engagement. The variables that increase complexity (Flesch-Kincaid Grade Level and parse-tree height) hurt engagement and the variables that should increase processing ease (word familiarity and concreteness) increase engagement.

Experiment

To further test the role of emotion, and the underlying processes, we conducted an experiment.

We manipulated emotions exogenously through participants writing about a time they felt either angry, anxious, or sad, plus a neutral control condition. Then, as part of an ostensibly unrelated experiment, participants read part of a neutral article and reported their interest in reading more. Finally, to test the hypothesized underlying process, we measured how uncertain and physiological aroused participants felt.

If emotion impacts reading, as we suggest, then the emotion induced in the first task should spill over into the second. Even though everyone read the same article, the incidental emotion manipulation should impact reading. By keeping the actual article the same across conditions, and manipulating emotion incidentally, we ensure that any observed difference between conditions is driven by emotion rather than some other factor.

Results

Consistent with the field data, while anxiety and anger made people want to read more (compared to the control condition) sadness decreased their interest in reading more.

Further, a series of bias-corrected simultaneous mediation models demonstrate that specific emotions' effects on reading were driven by arousal and uncertainty.

Taken together these findings make three main contributions. First, they shed light on psychological drivers of reading. Second, they help content creators design more engaging content. Third, they demonstrate how natural language processing can provide deeper insight into consumer behavior.

The Enhancing vs. Backfiring Effects of Emotionality in Consumer Reviews

EXTENDED ABSTRACT

A principal means by which consumers learn about products is through online reviews. Reflecting this importance, researchers have increasingly sought to understand what drives consumers to express their opinions online as well as the kind of content that is most impactful (King, Racherla, and Bush 2014). In this regard, a primary interest has been emotion. Literature reviews have put forth emotion as a predominate component of online content and word of mouth (Berger 2014; Hennig-Thurau et al. 2004). This research has emphasized that sharing emotional experiences is incredibly common (Rimé 2009) and that emotional content is more likely to become popular and spread (Berger and Milkman 2012). Moreover, consumers themselves turn to expressing positive emotion to persuade others to purchase a product (Rocklage, Rucker, and Nordgren 2018).

Thus, across researchers and consumers, there is a belief that greater positive emotional content should be more impactful. Is this the case? Past research on online reviews has focused on the effect of, for example, figurative language (Kronrod and Danziger 2013) or the level of energy a reviewer expresses (Yin, Bond, and Zhang 2017), but it has left emotionality – the extent to which an evaluation is based on feelings and emotional reactions – unexplored.

As background, reviewers and readers inherently view products from different perspectives (e.g., Packard and Berger 2017)"plainCitation":"(e.g., Packard and Berger 2017. Given that emotion is an integral part of the consumption experience, review-

ers naturally express emotionality when describing their experience with their product (Holbrook and Hirschman 1982). Readers, however, focus on the features of the product that are most important to them for their purchase decision. We show that when emotionality is a desired and expected facet of the product – e.g., hedonic products – positive emotionality has enhancing effects for both reviewers and readers. However, for products that are comparatively less emotion-evoking – e.g., utilitarian products – whereas this same level of positive emotionality continues to predict positive product judgments from reviewers, for readers it backfires and *decreases* their purchase intentions. Mistrust underlies this divergence: emotion expressed toward a utilitarian product evokes surprise and a sense that the review is odd, which leads to mistrust of the review. We examine these effects across five studies.

Study 1 used the Evaluative Lexicon (EL; Rocklage and Fazio 2015) to quantify the emotionality of 46,832 positive Amazon.com reviews written about approximately 500 hedonic and utilitarian products. Reviewers also provided a summary judgment via a final star rating. Regardless of product, the more positive emotionality reviewers expressed, the more positive their final judgment. Consumers visiting Amazon also judged these reviews for whether they were helpful or unhelpful ($n_{judgments}$ = 555,508). More emotional reviews were more helpful for hedonic products, but *backfired* for utilitarian. This held above the length of the review, when the review was written, and individual product fixed effects. Thus, emotionality predicted more positive evaluations from reviewers, but backfired for readers if the product did not naturally evoke emotion.

In Study 2a, we extended these results under controlled conditions. Participants (n = 200) identified a hedonic or utilitarian product they were positive toward. They then selected three positive EL adjectives that described their evaluation of that product and then gave a final judgment of that product (1: very negative; 5: very positive). As before, greater emotionality predicted more positive final judgments regardless of product type. These reviews were read by 242 participants who judged a random subset for 1) how helpful each was and then 2) their purchase intentions for that product. Using mixed modeling, emotionality was more impactful across both metrics for hedonic products, but backfired and decreased helpfulness and purchase intentions for utilitarian products. We conceptually replicated these results in Study 2b holding the product constant (hotels) and varying the hedonic versus utilitarian motivation for using that product.

In Study 3, we tested the theoretical proposition that mistrust underlies these effects such that 1) greater emotion toward utilitarian products 2) elicits surprise and a sense that the review is somewhat odd, which 3) leads consumers to mistrust the review, and thereby 4) leads readers to be less positive toward the product.

Participants (n = 196) read a product review that was either high or low in emotion and either hedonic or utilitarian (2×2 between-subjects). They then rated how surprising and odd the review was, their mistrust of the review, and whether they would purchase the product. As before, emotional reviews of hedonic products led to greater purchase intentions whereas emotionality backfired for utilitarian products. There was significant mediation: mismatching emotionality led to greater surprise and a sense the review was odd, which led to decreased trust in the review, which decreased the review's impact.

In Study 4, we assessed a consequence of this effect: which reviews rose to the top for a given product and thus were more likely to spread and be read by others? We returned to Amazon and extracted all reviews (n = 128,938) for a random subset of the products in Study 1 (there were additional reviews given time had passed since

Study 1). We recorded whether the review appeared on the product's front page or not. More emotional reviews were more likely to rise to the top and be displayed on the product's front page on Amazon for hedonic products, but *less* likely for utilitarian. Consequently, consumers are less likely to read emotional reviews of utilitarian products and they are therefore less likely to spread.

Whereas researchers and consumers alike tend to believe that greater positive emotionality is more impactful, we find that despite the undoubted positivity of the reviewer, positive emotion can backfire when expressed to others. We demonstrate this has consequences for helpfulness, purchasing intentions, and the spread of content.

Managing Online Venting: The Impact of Temporal Distance on the Perception of Negative Online Reviews

EXTENDED ABSTRACT

Brands are concerned with negative online reviews as it is a popular source of information (Leffler 2018) that influence consumer product evaluations and sales (Chevalier and Mayzlin 2006). While research has shown that positive reviews are more widespread, they have less impact than negative reviews (Chevalier and Mayzlin 2006; Mizerski 1982). Although there is research that has examined the negativity bias (Baumeister et al. 2001), there is limited research on what reduces the negativity bias (Chen and Lurie 2013).

We propose that temporal contiguity, when combined with emotionality, may cause consumers to discount negative reviews. In the case of reviews that exhibit "venting" (i.e., the combination of a review expressing negative emotion while being temporally close; Dalebroux et al. 2008), we believe that the review may be causally attributed more to the reviewer, causing the review to be seen as less influential (Folkes 1988; Mizerski 1982). We believe this will occur as readers will get the impression that the reviewer wrote "in the heat of the moment" and thus, may not be rationally examining their negative experience. Therefore, we believe that when there appears to be more personal reasons for a negative review, as exhibited through venting, that it will be negative, rather than positive, information that is discounted. We test this prediction in real-world data and five experiments.

In Study 1, we analyzed real-world data from TripAdvisor covering 1,665,026 reviews from 2,393 hotels between 2010 and 2015. We tested the effect of valence (review rating) and temporal distance between review-writing and the experience (the ratio of past tense/present tense language; Pennebaker et al. 2007) on negative emotionality (the percentage of negative emotion words in the review; Pennebaker et al. 2007), controlling for other factors. We found the 2-way interaction to be significant (b=.002, *p*< 0.0001) wherein, we see on average *more* negative emotion when there's *less* temporal distance between review writing and the stay and on average, we are *more* likely to see negative emotion when the stay and review occur close together. Essentially, we found that temporally close negative reviews were likely to exhibit negative emotionality, and thus, exhibit "venting."

Next, we examined if "venting" influenced the perceived helpfulness of online reviews. We examined review rating, temporal distance, and negative emotionality on the count of how "helpful" a review was. We found a significant 3-way interaction (b =-.0002, *p* < 0.0001) along with significant 2-way interactions and main effects. The simple effects showed that the average helpfulness of a review associated with a low rating (e.g., 1 or 2 stars) and with moderate to strong negative emotionality (i.e., 50% or higher), will be *lower* when the review is written *closer* to the hotel stay. Conversely, when the temporal distance increases, the helpfulness count increases

when there's negative emotion. This finding represents our core prediction: Reviews that exhibit venting (i.e., temporally close negative expression) are more likely to be discounted (i.e., deemed "less helpful"), possibly because venting is attributed more to the reviewer rather than the situation. Alternatively, negative emotions that are temporally distant are not seen as venting, and thus are more likely to be viewed as "helpful" (replicating the negativity bias).

In Study 2a (n=406), participants were randomly assigned to a condition in a 2(valence: positive, negative) x 2(time of review: immediate, later) between-subjects design. Participants read the same hotel review that was framed as being positive (4 stars) or negative (2 stars). They were told the review was written either right after the experience or two weeks later. We found a significant interaction on purchase intentions ($p<.001$) where, for negative reviews, temporal distance mattered ($p<.001$), such that when a negative review was written close to an experience, participants had higher purchase intentions (vs. when time had passed). Temporal distance, did not matter for positive reviews ($p=.282$). Study 2b replicated this core finding in a 3(valence: positive, negative, neutral) x 2(time of review: immediate, later, no information) between-subjects design.

In Study 3a, participants (n=196) indicated their belief that they would consider a positively [negatively] rated restaurant when the review was written right after the experience [two weeks later]. Participants rated how rational the review appeared to be. We found significant interactions on purchase intentions ($p=.040$) and rationality ($p=.028$) where for negative reviews, reviews written soon after the experience were seen as less rational and had higher purchase intentions than negative reviews that were written with greater temporal distance. There were no differences among positive reviews (both $p>.10$). We found a significant index of moderated mediation through rationality (with timing of the review as the IV and valence as the moderator; $CI_{95}[.004, .12]$), wherein purchase intentions for negative reviews were significantly and negatively impacted by perceived rationality ($CI_{95}[-.12, -.01]$). This effect was not significant for positive reviews ($CI_{95}[-.02, .03]$). In Study 3b (n=187), looking only at negative reviews where temporal distance was manipulated through the review language (i.e., Today vs. Last week), we replicated the mediation results of Study 3a while ruling out a number of alternative explanations.

In Study 4 (n=325), we manipulated the causal attributions associated with the review. Using a 2(attribution: reviewer, experience) x 2(time of review: immediate, later) between-subjects design with all negative reviews (same as in Study 3b), we found a significant interaction on purchase intentions ($p=.078$). Temporal distance mattered when the causal attribution of the review was on the experience (i.e., when there was no cues provided to make participants think the reviewer had personal motivations for the negative review outside experience; $p=.004$), such that when a negative review was written close to an experience, participants had higher purchase intentions (vs. when time had passed). Importantly, temporal distance no longer mattered when the review was causally attributed to the reviewer; in this case, both reviews, regardless of temporal distance, were discounted ($p=.594$).

Our results provide evidence that reviews that exhibit venting may be discounted, as negative information, when written in "the heat of the moment," is seen as lacking rationality, leading to the information being seen as less diagnostic.

Engaging Your Audience on Social Media: An Application to Politics

EXTENDED ABSTRACT

Organizations are increasingly turning to social media to reach consumers. A growing body of research in marketing has focused on how characteristics of the message content affect consumers' subsequent engagement with the post. While our knowledge of how content drives consumer engagement with social media, limited research has considered how characteristics of the audience may affect the extent to which they engage with an organization's social media activity. In this research, we investigate message content and audience characteristics jointly affect consumers' engagement with social media posts. As our empirical context, we collect nearly 30,000 Twitter posts from all U.S. senators during the first three months of the Trump administration. For each post, we observe the number of times that the post was retweeted and the number of replies the post generated. We also observe the change in followers on the days when senators' post.

Our analysis reveals that the partisanship of the senators' home states is informative of the extent to which their audience engages with them. We measure partisanship using Cook's Partisan Voting Index (PVI), which calculates the amount by which a state's vote share for a presidential candidate of a given party differs from the national average. Given the relatively close split between the Democratic and Republican parties, a PVI of 0 is indicative of a state in which there is a near even split between democratic and republican votes. In contrast, high magnitudes of PVI are indicative of a state that leans more heavily toward a single party. We contend that states with PVI values closer to 0 are comprised of multiple political ideologies and hence multiple audiences, whereas those states with high magnitudes of PVI values are more likely to be comprised of a single audience. Our analysis reveals that senators from states with high magnitudes of PVI amass more followers and have their messages retweeted more frequently than senators from home states with lower magnitudes of PVI.

In addition to this characteristic of the audience, we find that the emotional content of the Twitter posts from senators affects both the followers they amass and the degree to which their messages are shared by their followers. Using the NRC Emotion Lexicon, we identify the presence of eight emotions in Twitter posts: anger, anticipation, disgust, fear, joy, sadness, surprise and trust. We see that messages expressing anger, sadness and trust are more likely to be retweeted by followers. We also find that messages containing anger, disgust, sadness, surprise and trust generate more responses to the senators from consumers on Twitter. In contrast to the effects on replies and retweets, we do not observe a main effect of emotional content on senators' changes in followers.

Beyond investigating the effect of emotions on consumers' engagement with senators' social media activity, we also consider the interaction between the partisanship of the senators' home states and the emotional content of their messages. Consider a senator from a battleground state. This individual must appeal to both democratic and republican voters with his messages. In contrast, a senator from a state that leans more heavily toward one political party is primarily speaking to one party. We may therefore expect to observe differences in how consumers react to emotional content based on the degree of partisanship in the senator's home state. To accommodate this, we interact both PVI and PVI^2 with the eight measures of emotions in our analyses. Our focus is primarily on the interactions between the emotions and the quadratic term PVI^2, as this measure reflects the ad-

ditional impact of emotional language on social media engagement for senators' from more partisan states.

Our results suggest that social media messages expressing anger and disgust, two emotions that have been linked to higher arousal, are more effective at increasing followers in more partisan states. Social media messages containing sadness and trust generate fewer retweets and replies in these states. Overall, our analysis suggests that, even after accounting for the substantive content of the social media post and the presence of images, the use of emotional language affects the extent to which consumers engage with the posts. Moreover, the composition of the consumer base appears to moderate the impact of emotional language. We discuss the implications of our research for organizations seeking to build and engage their audience using social media.

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The Power of Product Packaging: Changing Perceptions and Living a Healthier Life

Chairs: Sheng Bi, Washington State University, USA
Maureen Morrin, Temple University, USA

Paper #1: The Unbearable Heaviness of Information: More Product Information = Higher Product Weight

Sheng Bi, Washington State University, USA
Kunter Gunasti, Washington State University, USA

Paper #2: Using Visual Packaging Design to Influence Taste Perception and Food Consumption: A Cross-Modal Effect Approach

Taku Togawa, Chiba University of Commerce, Japan
Jaewoo Park, Musashi University, Japan
Hiroaki Ishii, Seikei University, Japan
Xiaoyan Deng, the Ohio State University, USA

Paper #3: The Effect of Packaging Typeface on Product Perception and Evaluation

Xiaoyan Deng, The Ohio State University, USA
Alysha Fligner, Husky Energy, USA

Paper #4: Is Matte the New Black? The Impact of Learned Associations on Perceptions of Food Healthfulness

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SESSION OVERVIEW

Consumers face an overwhelming number of products at the marketplace. Essential challenges for most manufacturers are to make their products stand-out in a retail setting, effectively communicate the best information and increase the purchases of their products. This session aims to address these issues by exploring the roles of packaging. Across four papers, we demonstrate that packaging serves as a useful tool to help companies convey different product information and impact purchasing behaviors. Earlier research has found that packaging is a critical aspect of a product (Krishna, Cian, & Aydinoglu, 2017) and it can affect customers' product experiences by changing perceptions of product size (Scott, Nowlis, Mandel, & Morales, 2008), shape (Folkes & Matta, 2004), and color (Ares & Deliza, 2010). The papers in this session further explore more nuanced and unexpected influences of package designs. The findings contribute to the sensory marketing literature, offer insights for marketers on how to best communicate product information via packaging, help consumers make better decisions to improve their lives and provide implications for policy makers on regulating packaging.

The first two papers in the session explore how visual elements of packages influence consumer perceptions of a product. This focus on changing product perceptions in a different modality provides an expansion of existing research on cross-modal effects (e.g., visual vs. auditory, Shen & Senpupta, 2013). In the first paper, Bi and Gunasti show that the amount of product information presented on the package positively impacts consumers' perceptions of product weight and further affects willingness to pay for the products. This effect is driven by consumers' lay theory that "information has actual weight and more information has more weight". The second paper by Togawa et al. also tests the cross-modal effect, which demonstrates a visual–gustatory correspondence effect. This paper finds that food product image located at the bottom (vs. top) of the package façade enhances consumers' perceptions of the flavor richness of the food, which reduces consumption quantity and subsequently leads consumers to choose healthy snacks. The other two papers in the ses-

sion show that consumers' expectations of a product's healthiness can be altered by packaging elements such as font printed on the package-front and materials of packaging. The third paper by Deng and Flinger explores a typeface effect and finds that a natural font makes consumers perceive the product as healthier when the "healthiness" concept is made salient through an intrinsic cue or an extrinsic cue, or when consumers are sensitive to textual information. Finally, the fourth paper by Ye, Morrin and Kampfer finds a package type – healthfulness association. Specially, consumers infer a snack food packaged in a matte package as healthier than in a glossy package, which leads to a package material – purchasing motivation congruity effect. These findings provide important implications for consumers when consuming health-related products.

The Unbearable Heaviness of Information: More Product Information = Higher Product Weight

EXTENDED ADSTRACT

Consumer-packaged-goods explicitly provide weight information on the packaging. Yet, it is difficult for consumers to make sense of weight and perceptions of product heaviness can be very subjective. The current research investigates a strategy that marketers can use to manipulate perceptions of product heaviness: amount of product information presented to consumers. We further demonstrate how amount of information influences perceived heaviness of a product and its downstream consequences.

We proposed that the effect of information on weight is driven by people's lay theory that "information has actual weight and more information has more weight". People often use tangible metaphors to describe intangible concept such as information (for example: *information is like water*; Parker, 2000) and this metamorphosis of "information" into physical matter naturally introduces associations with physical properties such as weight. When people process a lot of information, they express the feeling as being *"weighed down"* as if too much information increases physical weight in one's mind. Due to the abundance of similar information-weight associations in both eastern and western cultures, we propose a positive impact of information amount on perceived heaviness of a product. We further illustrate that when there is a positive (negative) association between weight and quality of a specific product, providing more product information enhances (hurts) quality inferences and WTP.

We conducted six studies to test these hypotheses. Studies 1a and 1b help establish the positive relationship between information amount and perceived heaviness. In study 1a, we manipulated the amount of information printed on a laptop adapter then asked the participants to infer the weight of the product (1= 0.5 lb., 100= 1.5 lbs.). We found that participants in the "more information" condition perceived the adapter as heavier than those in the "less information" condition. In study 1b, we manipulated whether the manufacturer wanted the adapter to be perceived as heavy or light then asked participants to decide how much information should be printed on the adapter. We found that when designing a heavy adapter, people put more information on the product compared to designing a light adapter.

In studies 2 and 3, we further test the association of product information and perceived heaviness. In study 2, we recruited English speakers and provided unreadable Chinese information in order to

manipulate information amount in a clean way. We found that participants in the "more information" condition perceived the pan as significantly heavier than those in the "less information" condition. In study 3, we adopted the dual-phase paradigm (Broniarczyk & Alba, 1994) for manipulating two opposing correlational beliefs about information and heaviness. We found that participants in the "more information = heavy-weight" condition were significantly more likely to identify a Kindle with 32 e-books (vs. 2 e-books) as the heavier product compared to those in the "more information = light-weight" condition. Importantly, while there was no difference between the control condition (no belief manipulation) and "more information = heavy-weight" condition, participants in the control condition were still more likely to identify the 32-ebook kindle as heavier compared to the "more information = light-weight" condition.

Study 4 aimed to rule out an alternative explanation of space occupied by information. Using a 2 (information: more/32 e-books vs. less/2 e-books) × 2 (space: empty vs. full) between-subjects design, we manipulated the space occupied by the information by either spreading those e-books over the full screen (full condition) or just occupying the corner of screen (empty condition). While there was no interaction of information and space on perceived heaviness, we observed significant main effects of space usage and information amount. Participants perceived the kindle displaying 32 e-books on the screen as significantly heavier than the kindle displaying 2 e-books.

Study 5 aimed to rule out an alternative explanation of location of information. In a single factor (information: more vs. less) between-subjects design, we provided participants with either a seven-paragraph passage to describe the projector ("more information" condition) or seven short sentences ("less information" condition) followed by the picture of the projector. The increase in the amount of information significantly increased the perceived heaviness of the product.

Study 6a examined the complete chain of serial effects: amount of information → perceived heaviness → quality inference → willingness to pay, using a single factor (information: more vs. less) between-subjects design. In the "less information" condition, we used the regular box of a ceiling lamp, whereas in the "more information" condition, we included repetitive information on the front and back of the box. We found that information amount positively impacted perceived heaviness, which further increased perceived quality. The high-quality inference increased WTP for the product indicating a serial mediation effect.

In study 6b, we manipulated associations between weight and quality and found that information amount positively impacted perceived heaviness. There was also an interaction of perceived heaviness and weight-quality association on WTP. Importantly, the indirect effect of information on WTP via perceived heaviness was significant only when people held "the heavier the higher quality" belief; but not when they held "the lighter the higher quality" belief.

Our research contributes to the literatures on product weight, packaging, and lay theories. Also, we provide important insights for manufacturers, retailers, and advertisers about how much information to include on product packaging, advertising messages, and sales presentations.

Using Visual Packaging Design to Influence Taste Perception and Food Consumption: A Cross-Modal Effect Approach

EXTENDED ADSTRACT

Visual elements of packaging design serve as an important strategic tool for manufacturers and retailers to communicate sensory features of the food product to consumers (for a review, see Krishna, Cian, and Aydınoğlu 2017). However, there is little research on a visual–gustatory correspondence effect as well as its consequences for consumption quantity and subsequent choices. To address this gap, the current study proposed and documented a visual–gustatory correspondence effect whereby the imagery of a food product placed at the bottom (vs. top) of the package façade enhances consumers' expectations and perceptions of the flavor richness of the food. Moreover, this cross-modal correspondence between imagery location and flavor richness reduces consumers' consumption quantity and subsequently leads them to choose healthy snacks.

The literature on cross-modal correspondences shows that physical cues of heaviness, such as a heavy (vs. light) container, prompt people to perceive the food contained as being denser (e.g., Piqueras-Fiszman et al. 2011). In addition, past studies suggest the effects of heaviness manifest through both physical touch and semantic priming (Zhang and Li 2012). Since package design conveys a specific meaning to consumers (e.g., a bottom vs. top location signals visual heaviness vs. lightness, Deng and Kahn 2009; Sundar and Noseworthy 2014), we expected that as with physical heaviness, packaging imagery placed at the bottom (vs. top) of a package façade enhances consumers' taste perception (e.g., flavor richness) (H1). Given that the lower location of a food image enhances perception of flavor richness, we expected this cross-modal perception to, in turn, decrease the quantity of food consumed, since eating rich-flavored food results in satiety, and thus reduced motivation to eat (Rolls et al. 1981)subjects (n=32 and decreased food intake (H2). Moreover, because the feeling of satiety leads consumers to switch to a food of a different flavor (e.g., Inman 2001), we expected that a food image placed at the bottom (vs. top) of the package would result in a post-consumption preference for a healthy (vs. tasty but less healthy) snack (H3). To test these hypotheses, we conducted four laboratory experiments.

In Study 1A, 104 participants were asked to look at a fictitious package of chocolate chip cookies with the cookie imagery located at either the top or bottom of the package façade. Subsequently, they rated their expectations of the cookies' flavor richness and purchase intentions for the cookie on 7-point scales. As predicted, results showed that participants in the bottom (vs. top) condition expected the chocolate chip cookies to be richer in flavor and indicated higher purchase intentions for the cookies. Furthermore, mediation analysis revealed a significant indirect effect of imagery location on purchase intention through expected flavor richness.

In Study 1B, 194 participants were instructed to sit at a desk facing a liquid crystal display (LCD) screen; three pieces of almond chocolate and a questionnaire booklet were placed on the desk. After reporting their hunger level on a 10-point scale, participants ate all three pieces of the chocolate while looking at the package picture with candy imagery located at either the top or bottom of the package on the LCD screen. After eating all the pieces, participants evaluated the flavor richness of the chocolate on a 7-point scale. As expected, an analysis of covariance (ANCOVA) showed that, after controlling for self-reported hunger level, participants in the bottom (vs. top) condition perceived the chocolate as being significantly richer in flavor.

In Study 2, 155 participants were each given a snack package (containing 40 g of caramel popcorn) with the snack image placed at either the top or bottom of the package after reporting their hunger level on a 10-point scale. Then, we played a 15-minute nature documentary film on a screen and requested the participants to eat as much popcorn as they liked while watching it. After playing the film, we instructed them to stop eating the popcorn and indicate their perceived flavor richness, perceived satiety, evaluation of the documentary, and their dietary restraint on 7-point scales. Moreover, we measured each participant's consumption by subtracting the remaining amount of popcorn from the initial amount. An ANCOVA revealed that, after controlling for participants' hunger level, dietary restraint, film evaluation, and gender, the participants in the bottom (vs. top) condition ate significantly less popcorn. Moreover, serial mediation analysis revealed a significant indirect effect of imagery location on consumption quantity through perceived flavor richness and perceived satiety.

In Study 3, 152 participants were each handed a snack package (containing three pieces of chocolate) with the candy image located at either the top or bottom of the package. After looking at the package for 10 seconds, the participants were instructed to eat all three pieces of chocolate, and answer questions about their dietary restraint and demographic information. Furthermore, they chose either a tasty snack (normal chocolate bar) or a healthy snack (chocolate granola bar; pretested to be viewed as a healthier snack than the other option) as a reward for participation. A binary logistic analysis revealed that, after controlling for participants' dietary restraint and gender, the percentage of healthy snack choices in the bottom condition was significantly higher than that in the top condition.

Through four experiments, we found that the imagery of a food product placed at the bottom (vs. top) of the package façade positively influenced consumers' expectations and perceptions of the flavor richness of the food, and their purchase intentions for the product (Studies 1A and 1B). However, this cross-modal effect carried over to negatively affect their consumption quantity (Study 2) and even led consumers to subsequently make healthier food choices (Study 3). These results were consistent with H1, H2, and H3. To the best of our knowledge, this is the first study to identify a visual packaging design element that can *increase* taste perception but *decrease* consumption quantity. These effects contribute to addressing consumers' self-control dilemma between short-term benefits (e.g., eating a lot of tasty foods) and long-term benefits (e.g., reducing food consumption for their health).

The Effect of Packaging Typeface on Product Perception and Evaluation

EXTENDED ABSTRACT

Product packaging is generally considered a critical in-store marketing tool because its presence at the point of sale has the potential to convert a browser into a buyer. Previous research has studied package shape (Raghubir & Krishna 1999), size (Scott et al. 2008), and imagery (Deng & Kahn 2009). Packaging typeface is an understudied element.

Typeface is a set of fonts that share common design features. Research in information design has shown that design features of a typeface can yield connotations (e.g., elegance, novelty, potency) above and beyond the denotative message contained in the text (Bartram 1982; Rowe 1982). Thus, typefaces can affect audience responses via the interaction between the connotative meaning of the typeface and the denotative meaning of the text—when the two are consistent (e.g., a "sturdy" font is used for representing "sturdy"

professions such as construction work), the perception about the message is strengthened (Foltz, Poltrock, & Potts 1984; Lewis & Walker 1989).

In this research, we focus on the consistency between packaging typeface and the product's intrinsic or extrinsic cue. An intrinsic (extrinsic) cue, such as product ingredient (brand name), is something that is (is not) essential to the product in that altering it would (would not) change the composition of the product or affect its performance (Rao & Monroe 1989). We hypothesize that, when the typeface's semantic connotation and the information signaled by the product's intrinsic or extrinsic cue are aligned (e.g., when both are associated with "naturalness"), persuasion will be enhanced.

Henderson, Giese, and Cote (2004) identify six factors underlying various typeface design characteristics. One of them is "naturalness." In this research, we are interested in using packaging typeface to promote the product's health benefit. Our empirical work began with a pretest to identify "natural" versus "unnatural" typefaces. Participants rated a pangram ("The quick brown fox jumps over the lazy dog"), written in 16 different typefaces, on overall liking, naturalness, and legibility. Naturalness was measured by five 7-point scales (organic/geometric, looks typed/looks handwritten, active/passive, slanted/straight, curved/angular; Henderson et al. 2004; $\alpha = .83$). We selected *SketchFlow Print* to represent "natural" font (M = 3.45) and *Impact* to represent "unnatural" font (M = 2.51), both of which were rated equally likable (4.45 vs. 4.46) and legible (4.24 vs. 4.10). Manipulation checks in the following studies consistently found that the natural font was rated more "natural" than the unnatural font (p's <.0001).

Study 1 focused on intrinsic cue and used a 2 (fat-free vs. regular yogurt) x 2 (natural vs. unnatural typeface) between-subjects design. The stimuli were two yogurt packages differed on the nutrition information (fat free vs. regular) and the typeface used (natural vs. unnatural). All verbal information on the package was affected by the typeface manipulation. Participants were presented with the package and indicated their overall product evaluation, perceived product healthfulness, and perceived typeface naturalness. The interaction was significant for both healthfulness perception (F(1, 149) = 5.9, $p = .02$) and product evaluation (F(1, 149) = 4.2, $p = .04$). Plan comparisons revealed that, relative to participants who saw the unnatural-font package, those who saw the natural-font package perceived the product to be healthier (M = 5.20 vs. M = 4.32; t(149) = 2.7, $p = .008$) and evaluated it more favorably (M = 4.65 vs. M = 3.18; t(149) = 3.5, $p = .001$), however only in the fat-free (vs. regular) yogurt condition.

Study 2 manipulated an extrinsic cue by informing participants that the product was offered by Whole Foods (a store known for selling organic products) versus Meijer (a regional store without such reputation). The stimuli were two cookie packages differed on the store brand and the typeface used. The design and measures followed Study 1. The interaction was (marginally) significant for healthfulness perception ($p = .08$) and product evaluation ($p = .04$). Plan comparisons showed that those who saw the natural (vs. unnatural) font perceived the snack to be healthier ($p < .0001$) and evaluated it more favorably ($p = .04$), again only in the Whole Foods (vs. Meijer) condition.

The first two studies suggest that the use of a natural (vs. unnatural) font improves product perception and evaluation when the product's health benefit is made salient by the presence of a consistent intrinsic or extrinsic cue. In addition to product variables, in this research, we also investigate individual variables as potential moderators of the typeface effect. Study 3 examined consumer's verbal versus visual processing style (Childers, Houston, & Heckler 1985).

Because typeface characterizes textual information, we expect its effect to be stronger for individuals who chronically prefer to engage in verbal processing.

The stimuli were two cookie packages that displayed the natural or unnatural font. After the rating tasks, participants completed the style-of-processing scale (Childers et al. 1985). We averaged the 11 verbal items to form a verbalization index (α = .73; M = 30.23, SD = 4.10). For healthfulness perception, the typeface by verbalization interaction was significant (F(1, 98) = 4.7, p = .03). Furthermore, floodlight analysis using the Johnson–Neyman technique revealed that the typeface effect (i.e., healthfulness perception was higher when the natural font was used) was significant only for participants who scored higher than 29.34 on the verbalization index (B_{JN} =.59, SE =.30, p =.05). For product evaluation, the interaction was also significant (F(1, 98) = 9.3, p = .003). Again, the typeface effect (i.e., evaluation was higher for the natural font) was significant only for those who scored higher than 30.25 on the verbalization index (B_{JN} =.57, SE =.29, p =.05).

The three studies together suggest that packaging typeface conveying the "naturalness" connation can lead consumers to perceive the product to be healthier and like it better. However, this is the case only when the "healthiness" concept is made salient via the presence of an intrinsic or extrinsic cue, or when the consumer is particularly sensitive to textual information. In this sense, the typeface effect observed is subtle and necessitates careful managerial considerations.

Is Matte the New Black? The Impact of Learned Associations on Perceptions of Food Healthfulness

EXTENDED ADSTRACT

Consumers have learned that unhealthy snacks such as potato chips tend to be sold in glossy packages, whereas healthier snacks such as crackers tend to be sold in matte packages. As a result, consumers who see a snack food package with a matte [glossy] surface will infer greater [lesser] healthfulness of its contents, consume more [less] of it, and be more likely to choose a matte [glossy] package from an assortment if motivated to engage in healthful [tasty] eating.

Study Summaries

In Study 1, we conducted store checks in six retail outlets selling consumer packaged foods in a major metropolitan market in the U.S. We counted the number of glossy and matte shelf facings for two product categories--crackers and potato chips, which are generally believed to be more and less healthy per prior research (Deng & Kahn, 2009). A total of 2,656 packages were classified in this manner. We found the majority of potato chips on store shelves were packaged in glossy (76.8%) rather than matte packaging, whereas a minority of crackers were packaged in glossy (9.5%) rather than matte packaging ($\chi^2(1)$ = 1387.12, p < .001). The results support our contention that consumers have been repeatedly exposed to snack food packaging that creates and reinforces associations regarding package type and healthfulness (i.e., matte = healthier, glossy = less healthy).

Study 2 was a survey conducted online survey among Amazon MTurk participants (N = 211, median age = 32, 47% female). Participants believed that potato chip (versus cracker) packages were more likely to have a glossy surface ($M_{potatochips}$ =3.81, $M_{crackers}$ =2.48, paired t (210) =15.24, p < .001, Cohen's d = 1.05). Participants estimated that 65.3% of potato chips [38.7% of crackers] were sold in glossy rather than matte packaging (paired t(210) =13.81, p < .001, Cohen's d = 0.95).

In Study 3, 42 undergraduates (N = 42, median age = 20, 40% female) completed an Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998), which assessed the relative strength of associations between healthfulness concepts and package type indirectly. Participants categorizes pictures of healthy and unhealthy foods and glossy and matte packages that appeared in the middle of the screen. If it is true that participants have learned to associate healthy foods with matte packaging and unhealthy foods with glossy packaging, they should categorize the visual stimuli more quickly when the category labels are congruent, rather than incongruent. As predicted, the data yielded a positive D-score (D = .171, SD = .36, t(39) = 3.02, p = 0.004, 95% $CI_{D-Score}$ [0.06, 0.29]), indicating learned associations between matte packaging and healthy foods and between glossy packaging and unhealthy foods.

Study 4 measured the effects of packaging gloss on healthfulness inferences. 156 MTurk participants (median age = 32, 51.3% male) viewed a matte or glossy package of potato chips. Participants reported how healthy, fattening [reverse-scored], greasy [reverse-scored], oily [reverse-scored], and high calorie [reverse-scored] the chips were (order of items randomized; on 1 to 100 scales, α =. 89). An ANOVA on healthfulness perceptions as a function of package type was significant (M_{matte} = 51.04, M_{glossy} = 39.94, F(1, 154) = 9.01, p =.003; $\eta 2$ =.07).

In Study 5, students (N = 203, median age = 20, 39.9% female) in a purported taste test were given a caloric goal (to put about 50 calories of chips in a bowl for tasting). Participants poured out (M_{matte} = 11.77 g, M_{glossy} = 10.21 g, F(1, 201) = 4.86, p = .028; $\eta 2$ =.024) and consumed fewer potato chips from a plain white glossy versus matte package (M_{matte} = 5.63 g, M_{glossy} = 3.85 g, F(1, 201) = 6.74, p =.01; η^2 =.033),

Study 6 was a field study in which a display containing 36 packages (18 matte packages, 18 glossy packages) of single serving snack foods was attached to each of two food trucks on the campus of a large state university (one food truck which sold primarily large hamburgers and the other which sold primarily salads) for 25 days. We expected that patrons of the salad truck (versus burger truck) would be more likely to purchase the snacks packaged in matte (versus glossy) packaging, exhibiting a congruency effect. That is, consumers who choose to buy their lunch at the hamburger (versus salad) truck are, relatively speaking, likely more motivated by taste (healthfulness). If so, then hamburger (salad) truck patrons should be more (less) likely to select a snack packaged in glossy packaging, in accord with their taste (health) motivations for consumption. Results from a linear mixed model showed that, compared to patrons of the burger truck, patrons of the salad truck purchased a lower proportion of glossy packs ($M_{saladtruck}$ = 33.96%, $M_{burgerruck}$ = 72.72%, b = -.37, se = .06, t = -6.33, p < .0001; 95% CI: - .48 to -.25).

Contributions

This research is the first we are aware of to demonstrate how healthfulness inferences are influenced by package gloss, an easily neglected and relatively subtle sensory cue. Theoretically, current findings add to the product packaging research, especially the relatedly scares research in packaging surface and materials. Managerially, our results suggest that snack food marketers can alter expectations about their products by manipulating glossiness dimensions of their packaging. For example, marketers might enhance sales of their products by strategically using matte packaging for customer segments seeking health-related consumption benefits. Additionally, marketers of diet could use glossy packaging to enhance perceptions of satiation or indulgence – which may contribute to weight control goals.

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From Words to Wisdom in Conversational Language and Paralanguage

Chairs: Shirly Bluvstein, New York University, USA
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Paper #1: Hello! How May I Helo You? How Written Errors Can Humanize a Communicator

Shirly Bluvstein, New York University, USA
Xuan Zhao, University of Chicago, USA
Alix Barasch, New York University, USA
Juliana Schroeder, University of California, Berkeley, USA

Paper #2: How Concrete Language Shapes Customer Satisfaction

Grant Packard, York University, Canada
Jonah Berger, University of Pennsylvania, USA

Paper #3: Nonverbal Mimicry of Textual Paralanguage

Andrea Luangrath, University of Iowa, USA
Joann Peck, University of Wisconsin-Madison, USA
Victor Barger, University of Wisconsin-Whitewater, USA
Abby Haynes, University of Iowa, USA

Paper #4: The Impact of Dialogue Dynamics in Online Service Resolution

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Dhruv Grewal, Babson College, USA
Lauren Grewal, Dartmouth College, USA
Panagiotis Sarantopoulos, University of Manchester, UK

SESSION OVERVIEW

Much research has examined the words people use when talking in consumption-related contexts (cf. Berger 2014 review). But when it comes to consumer language, most research is constrained to static contexts such as advertising, online reviews, or sales pitches broadcasted from one to many. Considerably less attention has been paid to the interactive conversations happening among consumers, or between consumers and firm agents in digitally mediated, text-based interactions.

How can we gain wisdom from consumer conversations? This session integrates work examining language and paralanguage to help address this question. Can paralinguistic cues in text messages shift perceptions towards conversation partners, including "artificial" conversants (e.g., AI and chatbots)? Could linguistic signals of employee empathy or involvement boost customer satisfaction? This session examines these and other questions as it presents new insights on language and paralanguage in consumption-related conversations.

First, **Bluvstein, Zhao, Barasch, and Schroeder** investigate how seemingly incidental features in customer service conversations can humanize agents, whether those agents are human or machine (e.g. AI chatbots). They demonstrate that observing conversational "mistakes" (e.g., typographical errors) can make chatbots seem warmer, more human, and increase the sharing of personal information.

Second, **Ordenes, Grewal, Grewal, and Sarantopoulos** demonstrate that dynamic shifts in a service agent's linguistic style from dominant to submissive language have a positive effect on the customer's linguistic negativity and judgments that the issue was satisfactorily resolved.

Third, **Luangrath, Peck, Barger, and Haynes** examine mimicry in text-based conversations and find that people mimic the nonverbal paralanguage (e.g. emoticons, ALL CAPS) of their conversation partner. This behavior is mediated by empathy and, therefore, does not occur when responses will not be seen by its recipient. The authors further reveal a cross-modal visualization effect such that even visual and tactile TPL facilitate auditory processing of messages.

Finally, **Packard and Berger** demonstrate how linguistic concreteness shapes customer satisfaction. Agents speak more concretely (vs. abstractly) are seen as more personally involved in the customer's specific needs, leading to heightened customer satisfaction, purchase intentions, and real post-interaction expenditures.

In sum, these papers highlight how language and paralanguage enhance social interactions. We hope that this session will attract a wide audience of ACR attendees with interests in social influence, language, interaction modality, consumer experience, machine or AI agent interactions, and those interested in theory domains ranging from dialogical interaction to communication theory, and psycholinguistics to information processing.

Hello! How May I Helo You? How Written Errors Can Humanize a Communicator

EXTENDED ADSTRACT

Written communication is often dehumanizing. The conversational counterpart is removed in space and/or time, which can create detachment (Chafe, 1982). Furthermore, text lacks critical paralinguistic cues (e.g., voice) which convey the presence of a human-like mind (Schroeder & Epley, 2015, 2016).

As a result, text-based communication has been shown to reduce consumer trust, engagement, and willingness to share information or accept advice from an agent (Powers & Kiesler. 2006; Kiesler et. al , 2008; Waytz et. al, 2014). Yet, firms are increasingly conversing with consumers in writing, such as through chat platforms. In some cases, the conversational counterpart is a human; in other cases, it is artificial intelligence (AI).

Researchers have explored many factors of AI agents that may influence users' perception of their humanness. Some attempts suggest anthropomorphizing the agent by adding seemingly superfluous humanlike features of the agents, such as gender, face and name (Scassellati, 2004; Hoffmann et. al, 2006; Krämer, Lam-chi, & Kopp, 2009). Other efforts emphasize designing algorithms that can interact with humans flawlessly, with no errors. However, according to established psychological theories, to be truly human-like means to make mistakes (Aronson et al., 1966).

We propose a novel research angle for humanizing text: that making a written error and then correcting it should reveal a human-like mind behind the words. In three experiments, we test specifically whether errors lead readers to infer greater humanness from an ambiguous communicator, and whether this leads to behavioral consequences.

First, Experiments 1 and 2 examined whether people who read a written communication script from a customer service agent would share more personal information when the agent made a typographical error ("May I helo you?") and subsequently corrected it ("Sorry.. Help you") than when it made no error. To compare the humanizing value of an error with other humanizing cues, we asked 263 online participants in Experiment 1 to examine a message written by an online chat agent. In addition to manipulating whether or not the agent made an error, we also manipulated features of the agent, including

the agent's gender and whether the agent's photo was a real human or avatar. Participants then rated the humanness of the agent and indicated their likelihood to share personal information with it and use it again in the future.

As expected, participants perceived the agent who made an error as more human (F(1, 258) = 54.85 p < .001, η2 = .17). The gender and whether or not the agent made an error did not statistically interact with any other factor to influence humanness perceptions. The error also led participants to report significantly greater likelihood to share information with the agent (F(1, 258) = 6.42 p = .01, η2 = .02), and to use it again in the future (F(1, 259) = 8.69 p = .003, η2 = .03). Perceived humanness mediated the effect of error on both intention to share information (b= 0.66, SE = .13, 95% CI [0.41, 0.93]) and likelihood to use it in the future (b= 0.88, SE = .14, 95% CI [0.61, 1.17]).

Experiment 2 (n=402 online participants) used a similar paradigm to measure participants' intention to share personal information using more concrete items (e.g., phone number), as well as the impact of error on social perception of the agent (i.e., warmth and competence). We manipulated the presence of a typo and agent photo with a 2 (photo: avatar vs. human) × 2 (error: present vs. absent) between-subjects design.

We replicated the effect of error on perceived humanness (F(2, 398) = 59.80, p < .001, η2 = .13). Moreover, while the effect of error on sharing behavior was only directional (F(1, 398) = 2.24, p = .13, η2 = .006), there was a significant indirect effect of experimental condition on sharing behavior via perceived humanness of the agent (b=.86, SE=.17, 95% CI [0.54, 1.25]). We further found that the error increased the agent's perceived warmth (F(1, 398) = 10.55, p = .001, η2 = .03), but did not affect the agent's perceived competence (F < 1.1), and that humanness perception of the agent mediated the effect on warmth perception (b=.55, SE=.82, 95% CI [0.40, 0.72]).

Experiments 1 and 2 only included the presence and correction of a typographical error together. To better understand whether it is the error itself or the correction of the error that influences perceptions of humanness, Experiment 3 (n=391 lab participants) included a new experimental condition where the agent made but did not correct its error (uncorrected-error) in addition to the previous two conditions (no-error, or corrected-error). Moreover, to increase realism, this experiment introduced a real time chatting experience, where respondents interacted with a customer service agent who asked them personal questions ("Have you ever cheated on an exam?").

Results revealed a significant effect of error on perceived humanness (F(2, 388) = 4.58, p = .01); specifically, humanness perception was greater in the corrected-error condition than the uncorrected-error (p =.01) and the no-error conditions (p <.01). In addition, the effect of error on sharing personal information was marginally significant (F(2, 388) = 2.78, p = .06), whereby participants shared more in the corrected-error condition versus the no-error (p = .03) and the uncorrected-error (p = .06) conditions. There was no difference between the uncorrected-error and the no error conditions for both humanness perceptions and sharing behavior (ps > .6). These results suggest that the error alone is not enough to activate these effects; rather, it is the act of correcting one's error that reveals the presence of a conscious mind.

In aggregate, these experiments suggest that the way in which communicators write their words— such as making and then correcting a spelling error—can actually influence readers' predictions about whether a communicator is human. While prior research has mostly examined humanizing cues in spoken language, we contribute to a relatively new stream of literature exploring how written language can be humanized. Our results also provide insight into when

people might share personal information, with potential implications for consumer privacy.

How Concrete Language Shapes Customer Satisfaction

EXTENDED ADSTRACT

Consumers tend to agree that if there's one thing that companies could always do better, it's customer service. Accordingly, academics and marketing practitioners are greatly concerned with what they can do to improve the sales and service experience (e.g. Rust & Chung, 2006; Zeithaml, Berry, & Parasuraman, 1996). One of the most important things an employee can do is signal that they are personally involved in the customer's needs (Smith, Bolton, & Wagner, 1999).

But outside of actually saying "I care" are there more natural ways that employees can signal their personal interest in the customer's needs?

This paper examines whether the words they use can help. Specifically, we suggest that speaking more concretely can make customers more satisfied and more likely to purchase. Consider a customer who's interested in buying a shirt. While conversing with the customer, the salesperson might refer to the object in a very concrete way (e.g., "the shirt"), a very abstract way (e.g., "that") or somewhere in between (e.g., "the top" or "the clothing").

We suggest that these small linguistic variations can have an important impact on customers beliefs and behaviors. People tend to think about and describe themselves concretely, yet think about and describe others more abstractly (Eyal and Epley 2010). If concreteness can generate social cognitions, as we suggest, then agents that speak more concretely (less abstractly) about the customer's issues might signal that they are cognitively "closer" to the customer's personal needs. If so, using concrete language should boost satisfaction because it signals that the agent is personally involved and attentive to the customer's specific needs (Smith et al. 1999). More satisfied customers should have more positive intentions towards the firm (Singh and Sirdeshmukh 2000; Smith et al. 1999), and, in turn, may actually spend more with them.

We test these possibilities in four studies combining textual analysis of over 1,000 real customer service interactions in the field with lab experiments.

Study 1 used natural language processing (NLP) to examine 200 customer calls to an online fashion retailer. We used a bootstrapped extension of the MRC Psycholinguistic Database (Paetzold & Specia, 2016) to score over 85,000 English language words for their concreteness. Consistent with our theorizing, agents that used more concrete language on the call were perceived as more satisfied with the agent in an end-of-call survey (b = .17, t = 2.36, p = .02). This holds even after controlling for customer, agent, interaction, language features (b range = .08-.13, all ps < .01). A dynamic examination of the time-series of conversational turns using vector autoregression confirmed that the importance of employee concreteness also persists after accounting for temporal shifts in customer concreteness and other linguistic features.

Study 2 analyzed nearly 1,000 customer service emails to a consumer durables retailer using the same NLP methods as Study 1. These simpler, text-based email interactions help rule out the possibility that vocal cues or other interaction dynamics drove the results from Study 1. This study also asks whether concreteness impacts purchase behavior. Regression analysis supports the predicted relationship. Customers spent more following calls in which the agent used more concrete language (b =.08, t = 2.86, p = .004). This rela-

tionship was robust to a range of controls similar to those included in Study 1.

While the first two studies are supportive, one could wonder whether the relationship is truly causal in nature. To test this and examine the effect's mechanism, Study 3 (n = 88 student participants) directly manipulated linguistic concreteness and measured its impact on satisfaction, behavioral intentions and social perceptions. Participants received one of two versions of a pre-tested customer service scenario that differed only in the concreteness of two words used in the employee's response (e.g., "I can cancel them" vs. "I can cancel the shoes"). As predicted, using more concrete language increased customer satisfaction (F(1, 147) = 9.53, p = .002) and purchase intentions (F(1, 147) = 3.52, p = .06). Further, consistent with our theorizing, mediation analysis confirmed that this relationship was driven by perceptions that the employee was more closely engaged with the customer's needs (satisfaction indirect effect = .22, 95% CI [.08, .38]; purchase intentions indirect effect = .24, 95% CI [.09, .41]). This study also rules out mimicry, processing fluency, and language typicality as alternative explanations.

Study 4 replicates and extends the causal tests of Study 3, recognizing that linguistic concreteness can vary in different ways. We examined a series of subtle manipulations of nouns, adjectives, and verbs that each slightly increase concreteness, and measure their impact on satisfaction and purchase intentions. Participants received one of six versions of an employee saying they'd help them find a t-shirt in the color they wanted (e.g., "I'll go look for that", "I'll go search for that", "I'll go search for that t-shirt", "I'll go search for that t-shirt in grey"). The pattern of results over the six conditions (linear effects coding) replicated prior studies, finding that concreteness increased customer satisfaction (b = .10, t = 4.49, p < .001) and purchase intentions (b = .09, t = 4.28, p < .001). Mediation analysis confirmed that perceived involvement mediated concreteness' effect on customer satisfaction (indirect effect = .08, 95% CI [.05, .12]) and purchase intentions (indirect effect = .07, 95% CI [.04, .10]).

This research makes three main contributions. First, we deepen understanding of how language shapes consumer behavior. We demonstrate the important role of linguistic concreteness and the underlying process that drives its impact.

Second, we extend linguistic construal to the domain of social perceptions. While most work on concreteness examines the impact of concreteness on cognition, the present research reveals that people generate social cognitions through the language used by another person.

Third, from a practical perspective, these results have clear implications for improving marketing interactions with customers. Small shifts in the language customer service people use can improve a variety of important downstream marketing outcomes.

Nonverbal Mimicry of Textual Paralanguage

EXTENDED ADSTRACT

This research investigates mimicry of text-based nonverbal communication, termed textual paralanguage (TPL). TPL refers to the written manifestations of nonverbal audible, tactile, and visual communication (Luangrath, Peck, and Barger 2017). Currently in consumer research, there is a growing interest in gaining insights from text-rich data (Humphreys and Wang 2018; Moore and McFerran 2017, Packard and Berger 2017; Villarroel-Ordenes et al. 2018). Since consumer and brand messages are laden with TPL, we approach the study of language by focusing on how nonverbal cues are expressed and mimicked in text conversations.

It is a natural human tendency to mimic the mannerisms, facial expressions, and postures of those with whom we interact. Previous research into what has been dubbed "the chameleon effect" demonstrates that we mimic nonverbal cues when communicating in-person (Chartrand and Bargh 1999). Here, we investigate whether consumers mimic nonverbal cues when communicating online via text, so we ask: do models of behavioral mimicry apply to nonverbal textual mimicry? For example, if a consumer were to read a brand's tweet "Best. Sale. Ever.", an instance of auditory TPL, is the brand likely to reply with TPL? Whereas in-person mimicry is thought to occur due to a desire to affiliate (Lakin and Chartrand 2003), we expect nonverbal textual mimicry to operate via empathy.

Study 1a examines the extent to which TPL affects empathy. Amazon MTurk participants (N=309) were asked to evaluate a tweet: "To celebrate one week of healthy living, we're offering 20% off everything [EVERYTHING, woot woot, :)]." TPL was manipulated at the end of the tweet. Participants responded to "How much does the message help you empathize with the writer?" Results indicate that TPL facilitates empathy (M_{NoTPL} = 3.01, M_{TPL} = 3.65, $F(1,308)$ = 4.40, p = .037). In study 1b students (N=430) were presented with eight tweets that varied in positivity/negativity, sarcasm, and the type of TPL incorporated. Participants empathized more with the writer when TPL was used (M_{NoTPL} = 4.23, M_{TPL} = 5.14, $F(1,429)$ = 38.08, p < .001). Across instances of TPL, message content, message valence, and diverse populations, we demonstrate that TPL affects the degree to which a reader can empathize with a message.

In Study 2, we examine whether TPL is mimicked. Participants were asked to consider the following scenario: "You heard that one of your favorite music groups will be coming to perform in your city. You would really like to attend, and you decide to send a message and invite your friend, Pat, to attend the concert with you. This is Pat's text message response: I'm sorry I already have plans that day. [*sigh*] Please write a follow-up response to Pat." Manipulation of TPL occurred with the inclusion/omission of "*sigh*". Participants were much more likely to respond with TPL when the initial text contained TPL (β = .083, $t(722)$ = 3.44, p < .001). Moreover, individuals high in empathetic concern were more likely to respond with TPL (β = .094, $t(722)$ = 3.82, p < .001), indicating the importance of empathy in TPL mimicry.

In Study 3 we expect that TPL will not be mimicked when the message response will not be viewed, since in-person behavioral mimicry tends to occur more frequently in the presence of an interactant partner. This study is a 2 (TPL vs. No TPL) x 2(viewable vs. not viewable) design. Participants were shown a brand tweet either with or without TPL. Then, participants were asked to create a tweet about their positive experience with the brand, and told "the current algorithm on Twitter would [NOT] allow the brand to see the tweet that you create." Results reveal a significant interaction (β = 1.06, Wald ^{2} = 4.187, p = .041) such that individuals mimic TPL the most when it will be seen by the brand.

Study 4 explicitly tests the empathy account to nonverbal mimicry. Participants (N=246) were asked to view and respond to a tweet on their mobile device: One of your favorite restaurants, The Midday Café, is opening in your neighborhood. The café tweets the following: "Come visit our new location on Madison Street. Opening soon (soooooon, [smiling emoji], [high five emoji])." Results demonstrate that TPL facilitates empathy (β=-1.04, SE=.21, p < .001). Those who viewed the initial tweet with TPL were also significantly more likely to respond with TPL (β = -.30, SE=.11, p =.005). Mediational analysis reveals a significant indirect effect of TPL on mimicry via empathy [.08, 95% CI .02, .16]. Thus, TPL helps facilitate empathy, which encourages mimicry.

Study 5 further demonstrates this causal process by using a concurrent double randomization design to manipulate the mediator (Pirlott and MacKinnon 2016). Empathy was manipulated among participants prior to them viewing a text message from a friend with TPL also manipulated. Manipulated empathy affected the amount of textual paralanguage used in response ($F(1,183) = 3.53$, $p = .06$), again illustrating empathy's role in facilitating TPL mimicry.

Furthermore, Study 6 demonstrates TPL increases cross-modal visualization, which facilitates empathy, and results in mimicry of nonverbal expressions. Undergraduate students ($N=156$) were asked to respond to a brand tweet as in study 4. Participants rated a series of statements regarding the message: "I feel like I can hear how this would be spoken" (auditory), "I can imagine the facial expression that the speaker would have" (visual), and "I feel physically close to the sender of this message" (tactile). A serial mediational process demonstrates that all types of TPL facilitate auditory visualization, thereby increasing empathy and mimicry [.01, (5% CI .001, .023].

This research suggests that people engage in nonverbal mimicry in online textual communications, and, unlike behavioral mimicry, this phenomenon occurs due to heightened empathy. We find that mimicry of TPL does not occur when responses will not be seen, and that a cross-modal visualization effect exists such that even visual and tactile TPL facilitate auditory processing of messages. In short, textual paralanguage fundamentally communicates emotion, and we demonstrate here that the power of TPL is in its ability to make a message resonate with a consumer.

The Impact of Dialogue Dynamics in Online Service Resolution

EXTENDED ADSTRACT

In the "always on" digital landscape, responsiveness is critical, and customers seek out platforms that will enable them to obtain a response, often in writing, to establish proof of their agreement or grievance. Many firms thus invest heavily in improving their text-based customer service, such that these investments are expected to increase by 48% by 2020 (Berg, Gilson, and Phalin 2016).

The present research uses a dialogical approach (Kent and Taylor 2002), which considers how service interactions are contingent on relationships of control and trust between speakers, to investigate how FLEs can use language to handle negative emotion in customer complaints, and therefore contribute to service resolution. We make three main contributions.

First, we advance literature on complaining behavior by assessing the effect of negativity in customer complaints language on service resolution. Negative customer language is both harmful to the firm and hard for firm representatives to deal with (Henkel et al. 2017), however its effects have not been studied beyond face-to-face interactions.

Second, we extend the literature on digital customer service by assessing the mitigating role of FLEs' dominance language, contingent on the strength of the customer complaint. Recent research suggests that FLEs should take control of a customer complaint by using more action words (Marinova, Singh, and Singh 2018). We go a step further to posit that FLEs' language dominance can mitigate the influence of more negative complaints on service resolution.

Third, we advance the literature on service resolution by studying FLEs use of linguistic style matching (LSM). Greater LSM, or similarity in people's uses of function words, signals verbal synchrony, prompting perceptions of trust (Scissors, Gill, and Gergle 2008). We propose that FLEs can leverage LSM to mitigate the effects of strongly negative customer complaints.

Study 1 uses social media data from Twitter and Facebook, examining 1,142 complaint-initiated dialogues between a customer and FLE's from retail accounts. For our dependent variable, service resolution, we rely on crowdsourcing, such that for each dialogue, we asked three independent members of Amazon Mechanical Turk to read it and indicate, "Do you think the solution offered met customer needs?" (1 = "definitely not," 5 = "definitely yes"). Then, we measure the customer sentiment strength of each dialogue (i.e., how negative was the complaint) by using SentiStrength, a computerized text analysis tool (Thelwall, Buckley, and Paltoglou 2011). To assess FLEs' use of dominance in their language, we rely on Mohammad's (2018) dictionary of dominance, which lists 20,007 English words and their dominance scores, ranging from 0 (low) to 1 (high). Finally, we derive the degree of linguistic style matching (LSM) between the customer and FLE by relying on LIWC dictionaries (Tausczik and Pennebaker 2010), which are widely applied in marketing research.

Our modelling approach includes brand fixed effects and we standardized all the predictor variables. We control for several dialogue characteristics such as compensation, apology, product or process complaint, number of messages, use of pictures, etc. We specified three hierarchical models. As predicted, greater sentiment strength in customer complaints has a negative effect on service resolution ($\beta = -.06$; SE = .02, $p < .05$). We also find a significant main effect of FLE dominance ($\beta = -.07$; SE = .03, $p < .05$). The customer sentiment strength × FLE dominance interaction is marginally significant ($\beta = .04$; SE = .02, $p < .10$). We also find a significant customer sentiment strength LSM interaction ($\beta = .08$; SE = .02, $p < .001$).

With Study 2a and b, we replicate these findings in two controlled experiments that affirm that the effects in Study 1 are causal (vs. correlational) in nature. In study 2a and 2b, 394 and 395 MTurk workers respectively participated in two surveys for nominal payment. Both studies used a 2x2 between subjects design. We used identical dialogues from study 1 and only manipulated the level of sentiment strength, FLE dominance and LSM. MTurk workers reported the extent to which they believed that "the solution offered by the employee met customer needs" (1 = "strongly disagree," 5 = "strongly agree"). Both study 2a and 2b corroborated the findings of study 1.

In Study 3, we investigate a firm-owned, live chat platform maintained by a Fortune 500 consumer goods firm. We study both the text-based interactions on this platform and consumer responses to a post-service survey. We use the same operationalizations as in Study 1 for the linguistic predictor variables. The dependent variable is the customer response to the survey question, "Did we offer solutions that met your needs?" (1 = "strongly disagree," 5 = "strongly agree"). We also controlled for interactions that started with a chatbot rather than with a live agent, and the severity of the complaint. The results support our assertions. Greater customer sentiment strength has a negative effect on service resolution ($\beta = -.18$; SE = .06, $p < .01$); and we find a significant positive main effect for FLE dominance ($\beta = .14$; SE = .07, $p < .05$) and a significant negative main effect for LSM ($\beta = -.18$; SE = .07, $p < .01$). Furthermore, the customer sentiment strength × FLE dominance interaction is significant ($\beta = .11$; SE = .06, $p < .10$). We also find a significant customer sentiment strength LSM interaction ($\beta = .14$; SE = .07, $p < .05$).

These findings support our prediction that customer complaints with greater sentiment strength result in problems that are harder for FLEs to resolve. The effect of customer sentiment strength is moderated by FLE dominance: when customers express strong or moderate sentiments, a more dominant FLE can be more successful in meeting those customers' needs. Greater similarity in the language

used by FLEs while handling customer demands also mitigates the effect of greater negativity on customer complaints. Specifically, for customers expressing neutral or weak sentiment strength, lower LSM between the customer and FLE can be more successful, but for customers expressing stronger sentiment strength, a greater degree of LSM is more effective.

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Touch, Voice, and Kinetics: Interactive Influences on the Tech-linked Consumer

Chairs: Yanliu Huang, Drexel University, USA
William Hampton, University of St. Gallen, Switzerland

Paper #1: Horizontal Touch Interfaces and the Illusion of Discrete Content

S. Adam Brasel, Boston College, USA

Paper #2: Good Buzz, Bad Buzz: Using Vibrotactile Feedback to Shape Consumer Choice

William Hampton, University of St. Gallen, Switzerland
Christian Hildebrand, University of St. Gallen, Switzerland

Paper #3: Augmented Reality Helps Low-Involved Consumers Build Self-Brand Connection

Jae Jaeyeon Chung, Rice University, USA
Youjung Jun, Columbia University, USA

Paper #4: Understanding Consumer's Product Decisions When Shopping by Voice

Zhen Yang, Creighton University, USA
Yanliu Huang, Drexel University, USA
Barbara Kahn, University of Pennsylvania, USA
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SESSION OVERVIEW

The consumer market is increasingly dominated by personal mobile devices, with the share of all e-commerce transactions on touch devices, such as tablets and smartphones, growing three times faster than US e-commerce overall. The increasing ubiquity of mobile devices in the market has been accompanied by a shift in the ways in which consumers relate to and interact with their devices. Beyond the usual visual stimulation encountered, consumers now also interact tactically through touch and vibrations, auditorily through voice commands issued via virtual assistances, and most recently via kinetics through augmented reality (AR) movements. Each element of this interactive mélange of visual, tactile, auditory, kinetic input has critical implications for consumer behavior, yet the latter three constituents are much less studied in academic research in marketing. This special session explores how these novel sensory-interface modalities of consumer interaction systematically impact consumer experience.

Specifically, this session addresses two central research streams in consumer-device interaction:
1. How haptic interfaces and vibrotactile feedback affect consumer perceptions and purchasing intent.
2. How voice communication and augmented reality affect consumer-brand relationship and product selection.

The first two papers focus on the first research stream. The opening paper by Brasel examines how horizontal (vs. vertical) touch interface interactions influence consumers' information perception. Brasel shows that swiping between horizontal (vs. vertical) 'panes' of information creates perceptions of discrete breaks between information panels, making reviews appear more independent, and increasing perceived product information accuracy. In the second paper, Hampton and Hildebrand focus on another unique feature of haptic interfaces: vibrotactile feedback. They find that certain vibrations of intermediate length are perceived as rewarding, while longer vibrations are perceived as punishing. They apply this finding by pairing rewarding vibrational feedback (vs. non-vibrating) with online shopping behavior and show how vibrational feedback can stimulate purchase.

The third and fourth papers examine the role of human-computer interaction in shaping brand perception and product choice. Chung and Jun investigate how AR-integration of digital products into a consumer's physical environment affects consumer experience. They find that AR enhances self-brand connection for low-involved consumers. They further provide evidence that this improved self-brand connection is driven by a heightened consumer perception of the brand as communal rather than exploitative. Finally, Yang and colleagues examine how shopping by voice differs from the online shopping that is navigated by clicking or typing modalities. They find that that shopping by voice leads consumers to select more recommended products, compared to other modalities. They also identify the underlying mechanism for this discrepancy, which is voice shopping increases perceived socialness, which induces compliance behavior.

Our session contributes to the conference by documenting a range of unexplored expression modalities in research on consumer-technology interactions, a burgeoning area of research drawing on theory and methods from computer science, psychology, and design. We believe the session will spur the consumer researchers who are interested in innovations, consumer-technology interactions, and experiential consumption to seize the opportunity to further contribute foundational research in this growing and impactful research area.

Horizontal Touch Interfaces and the Illusion of Discrete Content

EXTENDED ABSTRACT

As computers have shifted from desktop and laptop computers to tablets and smartphone, interfaces have likewise shifted to direct-touch modalities where consumers directly interact with the content under their fingers. This has created a sea-change in the organization of e-commerce

information (Wang, Malthouse, & Krishnamurthi 2015), as sites adapt to differing screen sizes and the lack of a mouse or other indirect pointer. Touch interfaces have been shown to affect choice (Shen, Zhang & Krishna 2016) and alter information salience (Brasel & Gips 2015) when compared to non-touch interfaces. The largely vertical orientation of smartphones and tablet screens in comparison to the horizontal layout of traditional computer screens create new design considerations for how information can be presented. Swiping between pages has become a ubiquitous interface gesture, but horizontal swiping has received little exploration in the interface literature (Kerckhove & Pandelaere 2018; Dou & Sundar 2016).

In this paper, we argue that moving left or right between 'panes' of information via swiping creates a different cognitive structure than vertical scrolling. This pane-switching creates a natural break-point in the information, both visually and in cognitive processing, suggesting that the information in separate panes is somehow discrete or separate from information in other panes. This is consistent with tabbed web-browsing suggesting separate source pages as users move horizontally across tabs (Warr and Chi 2013). This should increase the amount of perceived information contained within a site, even if the amount of information is held constant. In addition, if information in horizontal panes is considered more separate or discrete when compared to information presented vertically, reviews may be seen as more independent from the storefront, product specifications may

be viewed as more accurate, and consumers may feel they have processed more information and thus be more confident in their choices.

In Study 1, 104 laboratory participants used an Android Tablet to shop for a pair of noise cancelling headphones. In the Horizontal condition, the information for each pair of headphones was separated into four "panels" of information that could be swiped between left-to-right: Description, Specifications, Customer Reviews, and Ordering Information, each one tablet screen long in vertical length. In the Vertical condition, the four panels of information (with the same content) were arranged vertically and scrolled top-to-bottom; the information was kept one tablet screen wide in horizontal width. The participant could move between the four pairs of headphones either via a vertical menu bar running down the left of the screen in the Vertical condition, or a horizontal menu bar running across the top of the screen in the Horizontal condition. Results show that participants felt the Horizontal design site contained more information than the Vertical design site (5.7 vs 5, $p < .05$), and reporting evaluating both more products (3.4 vs 2.9 $p < .05$) and more of the information (85% vs 72% $p < .01$) when making their choice. Consistent with predictions, Horizontal participants also rated the product reviews as significantly more trustworthy and objective than the Vertical orientation participants ($p < .05$), and predicted the product specifications were marginally more accurate as well ($p < .10$). These results combined to increase overall choice confidence and predicted product satisfaction for participants in the Horizontal condition versus the Vertical condition.

In Study 2 (120 participants, similar stimuli to Study 1), for a cleaner test of the touch interaction and to explore whether an effect of orientation remained even if information in both orientations was similarly 'paneled', smooth scrolling was disabled so the only way to move between information was either horizontal or vertical swipes that would move a full panel of information at a time. While the Horizontal-vs-Vertical manipulation's effect on perceptions of the amount of information available and perceived independence of reviews was reduced compared to study 1 (roughly halving in measures of effect size and power), the results remained significant (both $p < .05$), reinforcing that directionality plays as much of a role beyond just information compartmentalization via paneling. Respondents also rated the products as more varied when explored via the Horizontal versus Vertical menu bar (4.6 vs 3.8, $p < .05$). Participants in the Horizontal condition also recalled visiting significantly more panels of information in comparison to the Vertical orientation (similar to perceptions of information completeness in Study 1) when video evidence revealed there was actually no significant difference in the number of visited panels. This pattern of results is consistent with horizontal information paneling creating a higher salience of breaks between information, elevating perceptions of overall information and information independence.

In conclusion, touchscreen e-commerce sites that use horizontal panels of information that the user can swipe between (versus vertical information structures) create perceptions of discrete breaks between panels of information. This makes reviews appear potentially more independent, while increasing perceived accuracy of product specifications. It also increases the number of alternatives considered and artificially inflates perceptions of the amount of information considered. Future work could explore whether this effect may decrease with habituation, as horizontal swipes are a relatively recent addition to the e-commerce interface lexicon. It may also be useful to explore whether horizontal panel order leads to bias in product information processing, as other applications (such as dating apps) are creating a haptic language where right-swipes are positive and left-swipes are negative.

Good Buzz, Bad Buzz: Using Vibrotactile Feedback to Shape Consumer Choice

EXTENDED ABSTRACT

Nearly all consumers now carry a vibrating mobile device. Aside from the vibrating mobile phones and tablets many of us carry with us, an increasing number of consumer products have integrated vibrotactile feedback. For instance, the clip-on Lumo Sensor vibrates when its wearer begins to slouch (Peppet, 2014), the HAPIfork vibrates if the user is eating too quickly (Green, 2018), and the Fitbit wristband vibrates when a user reaches a fitness goal (Vanhemert, 2015). Despite the increasing ubiquity of devices producing vibrotactile feedback, rigorous research investigating how users process this feedback, and how it affects their decision making, is unclear.

Mechanical vibration, such as that emanating from a mobile phone, generates traveling waves of energy across the surface of the skin. Information from the skin, i.e. periphery, is carried to the spinal cord on individual nerve fibers, then to one or more second-order neurons which interface with the brain where the stimulus is processed. Tactile thresholds can be extraordinarily small with some people able to feel vibratory stimuli as minute as 250 Hz on the palm of the hand (Gescheider, Capraro, Frisina, Hamer, & Verrillo, 1978). In parallel, consumer research has begun to underscore the importance of haptic properties of consumer goods (Peck & Childers, 2003) and communications (Peck & Wiggins, 2006), as well as their impact on purchase intention, donation behaviors, and feelings of ownership and endowment (Peck & Shu, 2009; Shu & Peck, 2011). Adding to this stream of research, Brasel and Gips focus on the touch-

aspects of computer interfaces (Brasel & Gips, 2014a). Their findings suggest that the physical interaction with touch screens enhances consumers' sense of psychological ownership and endowment.

While there is evidence that the length of a stimulus can have an effect on the perceived intensity (Gescheider, Berryhill, Verrillo, & Bolanowski, 1999), measures more relevant to consumer behavior such as pleasantness and reward as well as the downstream consequences on economically relevant outcomes (such as market basket size) have been missing in previous studies. Similarly, although one study using infants hints that vibration may be a potent reinforcer (Schaefer, 1960), it remains unclear whether and how mobile device vibrations modify behavior in adults. Finally, although no study has examined use of vibration as a reward in healthy adults, a study using clinical population suggests that vibration may have long-term effects in modifying behavior (Bailey & Meyerson, 1969). Inspired by this line of prior work, the current research is specifically designed to provide new insight into the perception and influence of vibrotactile feedback on consumer decision making.

In Study 1, one hundred and fifty participants were recruited via Amazon Mechanical Turk. Participants were asked to click buttons that produced a vibration of a particular duration, and then self-report their perceptions. We also assessed a broad range of potential control variables at the end of the study, including general mobile technology usage behaviors (such as the usage of vibration features), sensation seeking, need for touch, and experiential thinking.

We find that reward perceptions vary according to vibration duration $F(3,147)=6.52$, $p<.001$. Specifically, vibrations of either 400 ms or 800 ms were perceived as significantly more rewarding than all other durations (all $p<.01$). The manner in which responses varied also appeared to be construct-dependent. For instance, we find that the relationship between vibration duration and perceived reward forms an inverted-u shape, with reward perception peaking around 400 ms. Notably, very short vibrations, e.g. 25 ms, or very

long vibrations, e.g. 3200 ms, were reported as punishing rather than rewarding. In examining the relationship between phone usage and other dependent variables, several theoretically and practically important relationships emerged. Higher mobile phone use positively correlated with both sensation seeking (r=.17, *p*<.05) and need for touch (r=.19, *p*<.05). Positive perception of vibration feedback also covaries as a function of participant traits: Participants who rated the vibrotactile feedback as more rewarding, also scored higher on measures of impulsivity (r=.42, *p*<.001) and experiential thinking (r=.36, *p*<.001).

Our first study demonstrated that vibrations of certain durations are perceived as rewards. Given that rewards have been consistently shown to affect motivated behavior (for review, see Papies, Barsalou, & Press, 2015), it follows that vibration feedback could be used to modify behavior. Building on this prior work, Study 2 we presented one hundred and fifty participants with a "Box Task". This task presented two boxes, with a button below each that adds an item to its respective box. These boxes resembled prototypical online shopping carts. Participants were instructed to press either button as many times as they liked to add items during a set 1.5 minute timeframe. Adding items to Box 1 produced a vibration (400 ms), while adding items to Box 2 did not. As predicted, we find that participants added more items to the vibration-producing box (Mclicks=14.69) than other box (Mclicks=10.71) that did not produce a vibration

F(2,148)=4.08, *p*<.05. We also replicated the previously observed negative quadratic-shaped relationship between vibration duration and perceived reward. Together our data strongly support the notion that specific time-durations of vibrotactile feedback are perceived as a reward, and when paired with a purchasing behavior like adding an item to a cart, can induce increased purchase intent and greater market basket size. These findings have broad implications for the use of vibrational rewards to modify a wide ambit of other mobile consumer behaviors.

Augmented Reality Helps Low-Involved Consumers Build Self-Brand Connection

EXTENDED ABSTRACT

Augmented reality (AR) bridges physical and virtual worlds by overlaying an image of a product onto the physical world (Javornik 2016). For example, customers use their mobile devices to project how Ray-Ban sunglasses look on their face, or which Cover-Girl lipstick looks good on them without physically trying them on. Since strong visual effects in product presentations help consumers imagine actual product experiences (Vessey and Galletta 1991), we hypothesize that integrating AR into consumers' shopping experience strengthens consumers' self-brand connection, especially for low-involvement consumers.

How does AR enhance low involved consumers' connection with brands? We argue that AR- assisted shopping experiences helps them to infer that the brands utilizing AR technology are communal, since AR-based assistance is intended to help fulfill consumers' needs. Consumers build relationships with brands in much the same way as they form relationships with people (Fournier 1998), and these can be either exchange-based or communal-based relationships (Clark and Mills 1993). Exchange relationships are monetary transaction based, whereas communal relationships are like friendships, where the focus is on caring and satisfying the partner's needs. For example, consumers who perceive a communal relationship with a brand are likely to perceive that the brand cares about their personal needs (Aggarwal 2004).

Together, we predict that AR increases the perception that a brand is communal, which will then enhance self-brand connection. We expect this effect to ensue particularly among low-involved consumers who use peripheral route processing and rely on environmental cues like AR assistance during their choice of products (Petty and Cacioppo 1986). By contrast, high-involved consumers are more likely to use central route processing and focus on actual product attributes and ad argument quality. Therefore, they are less likely to rely on AR-assisted shopping and the consequent brand image as communal to enhance their connection with the brand.

Study 1 shows that consumers who are low involved in shopping can build strong self-brand connection after using (vs. not using) AR. In a 2 (AR vs. control) × 2 (high vs. low involvement) between-subjects design, 169 participants reported their attitude toward Ray-ban sunglasses twice – before and after negative brand information was given. This is a common

measure of self-brand connection (Ahluwalia, Burnkrant, and Unnava, 2000). Our prediction was that participants who have a strong self-brand connection would be less disturbed by the negative information and continue to prefer the brand (i.e., small change in brand attitude due to negative information). We manipulated involvement (Litt and Tormala, 2010) by varying the importance of this shopping task (e.g., High involvement: "Your opinion counts!" vs. Low involvement: "Broad anonymous group's preferences"). Participants shopped for Ray-ban sunglasses, either by overlaying sunglasses onto their own photo (AR condition) or using a default model's face (Control condition). Among less involved participants, those who used AR (vs. Non- AR) defended the brand by reporting small change in their attitudes after hearing negative information about the brand (M_{AR} = 0.42 vs. M_{Non-AR} = 1.24; *p* = .018), whereas AR did not affect highly involved participants' attitude change. There were no differences in participants' choice of sunglasses, their product liking, nor their psychological ownership over the chosen product (all *n.s.*).

Study 2 replicates the findings using Sephora brand. Female participants (N = 181) were randomly assigned to one of the 4 conditions in a 2 (AR: yes vs. no) × (involvement: high vs. low) between-subjects design. We again manipulated involvement by varying the importance of the shopping task. Next, participants either used the AR feature or not to shop for lipsticks.

Participants in the AR condition used their webcam to take a picture of themselves, and applied lipsticks on their face using the AR feature. Participants in the non-AR condition used default model pictures provided from Sephora. Then, we measured self-brand connection using scale from prior literature (Escalas and Bettman 2005). Low involved consumers increased self-brand connection after using (vs. not using) AR (M_{AR} = 5.46 vs. M_{Non-AR} = 4.61; *p* = .005). There was no significant difference within the high involvement condition. People's liking of the chosen lip products also did not differ across conditions. We also measured whether AR enhances mental simulation of the process and the outcome of the consumption experiences; however, we did not find significant differences across conditions (all *n.s.*).

Study 3 demonstrates that AR's effect on self-brand connection among low involved participants are driven by their inference about brand's communal characteristics. In a 2 (high vs low involvement) × 2 (AR vs. non-AR) design, we manipulated involvement by again varying the importance of the shopping task. Then, participants shopped for throw pillows from Amazon app using smartphone. Participants in the AR condition used the AR feature in the app, so they could virtually see an image of the throw pillow on an actual chair in the lab. That is, the app overlaid a digital image of a pillow on par-

ticipants' camera view of the chair. Participants in the Non-AR condition shopped for a throw pillow using a typical search procedure on Amazon app. We measured perception on communal relationship with the brand on an 8-item scale (Aggarwal 2004).

Results revealed that among low involved participants, using AR increased their self-brand connection with Amazon (M_{AR} = 4.65 vs. M_{Non-AR} = 4.13; p = .044). There were no differences within the high-involvement condition (*n.s.*). Supporting our prediction on the process mechanism, we found a significant mediation effect of relative communal score (PROCESS Model 8: CI = [-.34, -.05]). Participants' liking of the chosen products and positive affect arousal during the shopping task did not differ across conditions.

In summary, our results reveal that consumers who are less involved in shopping infer from AR- assisted shopping experience a communal brand image, which then increases their connection with the brand. In contrast, when consumers are already highly involved in shopping do not rely on such cues and heuristics for their inference, therefore using AR does not increase self-brand connection.

Understanding Consumer's Product Decisions When Shopping by Voice

EXTENDED ABSTRACT

Despite the rapidly evolving of artificial intelligence and the technology infusion in retailing, sparse research exists on this topic in marketing literature (Grewal, Roggeveen and Nordfält 2017). Compared with traditional online shopping that navigated by point and click (i.e., click-based interaction), shopping with virtual assistant allows consumers to place an order either by talking (i.e., voice-based interaction) or texting message (i.e., text-based interaction). Based on previous research, which suggests that expression modality can influence consumer's decision making (e.g., Kless, Levav and Goukens 2015; Shen and Sengupta 2018), we propose that voice-based interaction will make consumers more likely to choose the recommended product during their online shopping journey.

Prior research shows that people's attitude towards an object can be determined by how they interact with it. For example, socially interact with a robot can increase the anthropomorphism of the robot (e.g., Peca et al. 2015). We propose that since voice-based interaction carries more social functions than text-based interaction or click-based interaction (e.g., Chafe 1982), engaging in voice-based interaction will incite people to feel that they're interacting with a social actor rather than a computer. Consequently, this enhanced social perception will lead to compliance behavior (Cialdini 2016). As a result, consumers will end up purchasing more recommended products. Furthermore, we also argue the interaction effect may only exists in dialogical interaction, where people will get social responses from the computer reciprocally but will diminish in monological interaction, where the computer's social responses are absent. This is because social interaction is two-way in nature, while one-way communication will create social distance and undermine the social bonds between communicators (Andreoni and Rao 2011).

A fictitious online food ordering website was developed to examine our hypotheses. The website contains three product categories: pizza, sandwiches and chicken wings. Under each category, five to six products are provided, and some are labeled as recommended (i.e., regular recommended products). Before checkout, participants will be asked whether they would like to add a salad or fries to their orders (i.e., add-on products). The measurement of recommended products includes both regular recommended products and add-on products. We also created different website versions to manipulate both user communication modality (speak vs. click vs. type) and

existing communication and human-computer interaction literature and also provides important managerial implications to practitioners for designing a more effective virtual assistant system.

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How Do Consumers Value their Private Data?

Chairs: Geoffrey Tomaino, INSEAD, Singapore
Klaus Wertenbroch, INSEAD, Singapore
Daniel Walters, INSEAD, France

Paper #1: The Bulletproof Glass Effect: When Privacy Notices Backfire

Aaron R. Brough, Utah State University, USA
David A. Norton, University of Connecticut, USA
Leslie K. John, Harvard Business School, USA

Paper #2: Telling Your Secrets to an AI: Consumers Prefer Disclosing Private Personal Information to an AI (vs. a Human)

Tae Woo Kim, University of Technology Sydney, Australia
Li Jiang, The George Washington University, USA
Hye Jin Lee, Indiana University, USA
Adam Duhachek, Indiana University, USA

Paper #3: Consumers Place a Lower Value on Private Data When Exchanged for Goods as Opposed to Money

Geoffrey Tomaino, INSEAD, Singapore
Klaus Wertenbroch, INSEAD, Singapore
Daniel Walters, INSEAD, France

Paper #4: From Privacy Concern to Privacy Mindsets

Aaron R. Brough, Utah State University, USA
Kelly D. Martin, Colorado State University, USA

SESSION OVERVIEW

With the advent of objective and measurable tracking of online behaviors came a recognition that such data could be used for consumer segmentation and targeting. While such microtargeting reduces search frictions and allows for more relevant advertising, it comes at a cost of consumers' privacy. How do consumers conceive of this loss of privacy in the face of efficiency gains from technology? This session asks how consumers navigate this landscape. Within this broader line of questioning, a central element running through the papers in this session is the nature of context and how it impacts consumer attitudes/behaviors towards their private data. Three of these papers experimentally demonstrate the impact of situational factors on a consumer's sense of privacy, while Brough and Martin, a conceptual paper, argue that privacy should be recognized as a mindset. Overall, these papers call attention to the idea that consumers are still learning how to assess an online experience that is increasingly surveillant and how to manage their private data in line with their goals.

Brough et al. demonstrate that consumer conceptualizations of privacy are indeed more nuanced than might be intuited. Specifically, they demonstrate that assuring consumers that their data is secure can actually increase vigilance and thus negatively impact purchase intent, a phenomenon the authors refer to as the "Bulletproof Glass Effect."

Kim et al. compliment the preceding paper by demonstrating that AI interaction, a circumstance endogenous to online interactions like data protection assurances, has the opposite impact and makes consumers more willing to disclose personal information than they would be with a human counterpart. This is due to consumers feeling that their data is actually safer in the hands of an artificial agent.

Tomaino et al. further demonstrates the importance contextual information on how individuals evaluate their privacy, specifically by examining how consumers handle this newly marketable resource. The paper demonstrates that individuals value their privacy less when exchanging it for goods than when they exchange the same amount of their private data for money. The findings cast doubt on the efficiency of the ever-growing market for personal data.

Brough and Martin provide a framework that aids in understanding the complex nature of private data ownership and transactions highlighted in the aforementioned papers. Specifically, this is done through drawing attention to "privacy mindsets" or malleable psychological states that characterize how we conceptualize privacy.

Together, these papers raise a line of questioning related to the protection of our private data that goes beyond just an impulse to do so. By investigating the impact of contextual factors on consumer decision making in the realm of private data, we can better understand and aid consumers as they progress towards their goal of responsibly managing and protecting their data while still gaining benefits from the exchange thereof.

The Bulletproof Glass Effect: When Privacy Notices Backfire

EXTENDED ABSTRACT

Consumers regularly encounter privacy policies explaining if and how their personal information will be collected, stored, used, and shared. Most consumers desire such assurances; in a pilot test, only 14.3% of respondents indicated that they would rather do business with a company that does not have a privacy policy than with one that does.

To consumers with salient privacy concerns, the assurance offered by a privacy notice might be appealing for several reasons. First, privacy notices place legally-enforceable limits on how organizations can collect, store, use, and share consumers' personal data. Second, privacy notices often communicate security measures (e.g., encryption, firewalls) that are in place to protect consumer information from misuse. Third, in locations and industries where privacy notices are not mandated by law, the fact that a company voluntarily opts to disclose its data practices may signal that it is forthcoming and trustworthy.

In contrast to conditions where privacy concerns are already salient, in this research we examine conditions under which privacy concerns may be dormant and, in this context, challenge the assumption that privacy notices increase a consumer's sense of security. Instead, we argue that privacy notices, although designed to promote a sense of confidence that personal data will not be misused, can decrease perceived security and purchase intent (relative to a condition in which privacy assurances are either not provided or less salient).

We refer to this finding as the *bulletproof glass effect* because a privacy notice may be analogous to bulletproof glass; although designed for protection, its very presence may raise the salience of potential dangers and paradoxically cause consumers to feel more vulnerable than they would in its absence (holding constant the actual level of risk in the environment). We attribute this ironic consequence of privacy assurances to the heightened risk awareness we expect them to produce.

Evidence from a field experiment and five lab studies is consistent with these predictions and lends support to our proposition that the mere presence of a privacy assurance can undermine rather than enhance perceived security and purchase intent.

Study 1 was a field study among more than 15,000 prospective customers of a financial services firm, demonstrating the bulletproof glass effect by showing that increasing the salience of a privacy notice reduced enrollment rates.

Study 2 provided a conceptual replication of the bulletproof glass effect in the lab, showing that the presence (vs. absence) of a privacy notice can ironically decrease rather than increase purchase intent (and that this effect is mediated by a decrease in perceived security).

Study 3 showed that despite the opposite outcomes they are designed to produce, both assurances and warnings can decrease consumer interest in a product. Purchase interest and perceived security were lower not only after receiving a warning prime, but also when a privacy policy was present (vs. absent).

Study 4 showed that the bulletproof glass effect influences downstream consequences, such that the presence versus absence of privacy notices changes consumers' personal willingness to pay for a product (without affecting their perception of the product's value in the marketplace). As predicted, although the presence of a privacy policy decreased willingness to pay, it did not decrease expected retail value.

Study 5 provided additional support for our theory that the salience of privacy concerns drives the bulletproof glass effect by showing that the effect is a function of the evaluation context, such that it is more likely to be observed in separate rather than joint evaluation (where privacy concerns are made salient by comparative processing). Consistent with our predictions, the bulletproof glass effect observed in our previous studies was replicated in separate evaluation, but attenuated in joint evaluation.

Finally, study 6 used a very conservative test in which mere awareness that a privacy policy exists, even when its content is not seen, was sufficient to decrease purchase intent and affect a behavioral measure of willingness to disclose personal information.

From a theoretical standpoint, this research highlights conditions under which consumers process assurances as warnings and provide new insights regarding persuasion and the drivers of perceived risk and security. Just as warning messages do not always achieve their intended effects and sometimes fail to increase consumer compliance (Menon, Block, and Ramanathan 2002), we show that privacy assurances similarly do not always achieve their intended effects and sometimes fail to increase perceived security.

These findings parallel prior research suggesting that contrary to their overt intentions, warnings can be reassuring. For example, consumers seem to trust advisors who disclose conflicts of interest (Cain, Loewenstein, and Moore 2010) and tend to be more persuaded by messages that include negative information (Ein-Gar, Shiv, and Tormala 2012; Herr, Kardes, and Kim 1991; Ward and Brenner 2006). We complement such research by showing that likewise, contrary to their overt intentions, assurances can be disconcerting—particularly in contexts in which initial risk awareness is low.

Moreover, our findings bolster the paradoxical phenomenon that although most consumers claim to want transparency in privacy practices, they may react negatively to it—greater transparency in the form of privacy policies can sometimes backfire and reduce rather than enhance perceived security.

Our findings that mere awareness of the existence of a privacy policy—even when it is not viewed—can decrease interest in purchasing a product, suggest that companies have an incentive not to provide privacy notices (despite demands by consumer advocacy groups for greater transparency in how private consumer data is managed). This negative incentive may hinder compliance, and even if regulators enforce compliance it could lead to a climate of distrust as consumers' perceptions of security are decreased rather than increased by the additional assurances. However, we also show that in joint evaluation, the bulletproof glass effect is attenuated, suggesting that companies wishing to provide assurances without detracting from consumers' perceptions of security may increase their chances of success through direct comparison to a competitor that is less transparent in its data practices.

Telling Your Secrets to an AI: Consumers Prefer Disclosing Private Personal Information to an AI (vs. a human)

EXTENDED ABSTRACT

In the new data-driven economy, it has become standard practice for consumers to be asked to share increasingly personal information about their consumption experiences and preferences. Several scholars have noted that this trend poses new privacy hazards for consumers (e.g., Phelps, Nowak, & Ferrell, 2000). The addition of artificial intelligence (AI) has made the picture more complex as AI collect and process huge amounts of data, making it possible to aggregate and profile consumer information to predict behaviors and attitudes that consumers may not be comfortable disclosing. In this sense, AI may pose an even bigger threat to privacy. However, ironically, our research shows that consumers may be more likely to disclose private information to a corporate AI than a human corporate employee. Past research demonstrated that privacy decisions are highly malleable: consumers are less defensive to privacy violations in less physical and sensorial environments, such as online as opposed to face to face interactions (Acquisti, Brandimarte, & Hancock, 2015). Because AI is often perceived as a disembodied computer program (Dietvorst, Simmons, & Massey, 2015), we theorize that consumers are often more likely to reveal their personal information to an AI (vs. a human). We theorize that these differences are driven by greater concern of the potential future uses of data by AI versus human analysts. We further theorize that this effect is enhanced when the content of the information casts the self in a negative light, such as when disclosing embarrassing or guilt-inducing experiences. We show that no such disclosure effect exists when sharing general negative emotional experiences with no negative implication for the self (e.g., sad experiences).

In Study 1, 288 participants recruited from MTurk and were asked about their past experiences purchasing condoms. After completing a brief questionnaire of their past experiences, we asked participants to indicate to what extent they were willing to disclose the following personal information (1 = absolutely no; 9 = absolutely yes): phone number, home address, a selfie, a photo of their family, their internet browsing history. In the AI (human) condition, we told participants that the information collected would be processed by a computer algorithm (a human analyst). We found that participants were more likely to disclose personal information to a computer algorithm (M = 2.06) than to a human (M = 1.59), $F(1, 286) = 7.10$, $p < .001$.

In Study 2, fifty-nine undergraduate students participated in the study and were randomly assigned to one of the conditions in a 2 (agent: AI Alexa, human confederate) between-subjects design. Participants were told that they would write one of their consumption experiences that made them feel guilty and the purpose of sharing the experience was to learn about their personal preferences and make them personalized product recommendations. In the AI Alexa (human) condition, Amazon's voice assistant Echo (a human confederate) was made visible to the participants and they were told that their written texts will be assessed by Alexa (by the person).

After the completion of the guilt writing task, participants reviewed their own writings and reported the extent to which their writings disclose "personal information" and "private information." (1 = not at all, 7 = very much). The two items were averaged to create a privacy disclosure index (α = .89). As predicted participants in the AI condition (M = 4.66, SD = 1.43) felt that they had disclosed more private information compared to the human condition (M = 3.77, SD = 1.45), F(1, 57) = 5.63, p = .021. Further, a judge who was blind to the experimental design coded the the extent to which the writing disclosed private and personal information (1 = not at all, 5 = very much). Consistent with participants' self-report, the judge's coding revealed that participants in the AI condition (M = 2.97, SD = .91) disclosed more private information compare to the human condition (M = 2.53, SD = .73), F(1, 57) = 4.09, p = .048.

To demonstrate privacy concern is the underpinning reason, we suggest that this above effect only holds for disclosure of private information (e.g., an embarrassing or guilty experience), but not for disclosure of non-private information (e.g., a sad experience). Thus, in Study 3, one hundred and sixty participants from MTurk were randomly assigned to one of conditions in a 2 (agent: AI, human) x 2 (emotion: guilt, sadness). Participants in the AI (human) condition were told that their writing would be reviewed by an "AI" ("a human"). Then participants were instructed to describe one of their experiences that made them feel either guilty or sad. Just as in Study 2, participants wrote about the experience and reported the extent to which their writing disclosed "personal information" and "private information." (1 = not at all, 7 = very much). The two items were averaged to create the index of disclosure (α = .91). The index was submitted to a 2 (agent: AI, human) x 2 (emotion: guilt, sadness) ANOVA. The result revealed only a significant interaction between agent and emotion, F(1,156) = 13.45, p < .001. Also, pairwise comparison showed that when participants described their guilty experiences, they disclosed more private information to an AI (M = 2.42, SD = .84) than to a human (M = 1.90, SD = .42), F(1,156) = 15.14, p < .001. There was no difference in disclosure of sad experiences between the two types of agents, p = .186.

In summary, this research shows that individuals are more likely to reveal their private information to intelligent non-human agents (vs. human agent) and paradoxically, to view this information as being more personal. We posit that these effects are driven by greater concerns over future usage of personal information by AI as compared to humans. We further show that this effect only pertains to information that casts the self in a negative light, such as guilt-laden or embarrassing experiences. Our findings suggest that firms should decrease (increase) human (AI) involvement when the consumption context is likely to trigger negative social emotions.

Consumers Place a Lower Value on Private Data When Exchanged for Goods as Opposed to Money

EXTENDED ABSTRACT

The acquisition and use of consumer data is central to the business models of most consumer-facing firms. Private data is a resource, one for which consumers should demand a consistent and equitable payment. For instance, users provide websites with their private data in return for services offered by these sites (e.g., access to social networks). This suggests that users ought to value the services offered by these sites more than the private data they provide. However, our results show that this is not necessarily the case. That is, when exchanging private data for a good as opposed to exchanging the same private data for money, consumer preferences for privacy are intransitive, violating a basic axiom of rational choice

theory (von Neumann and Morgenstern 1944). More specifically, we show that consumers demand less value in goods/services than they do in money when "selling" their private data. By demonstrating this systematic violation of rationality when valuing private data, our research also provides further suggestive evidence that markets for private data are inefficient (Acquisti et al. 2013).

We propose that consumers undervalue their private data when trading them against goods/services, relative to money, because they do not view their data as a marketable resource, even though they are to firms. Consider a consumer using the services of Uber. Whereas the consumer conceives of this as a simple monetary transaction of a fare for transportation, Uber also collects personal data and uses this information to generate profits. We propose that the consumer neglects to fully incorporate the value of their data in this exchange. Consider a second scenario where the same customer is asked to sell this same data in a purely monetary transaction. We propose that the sale price of data will be higher in this monetary transaction compared to the exchange of data for value in the form of goods. We suggest that the difference in valuations occurs because a monetary transaction conveys to consumers that private data are a marketable resource in a way that an exchange setting does not. Given that the loss associated with giving up private data is identical in both settings, making consumers aware of this information ought to increase their valuations in a monetary transaction setting.

In Study 1, we tested our central hypothesis in an incentive-compatible setting. Participants were recruited through Prolific Academic (N=140, pre-registered on aspredicted.org). Participants entered the experiment and completed three blocks of a price list tradeoff task: In the first block, participants indicated the amount of money they would demand to give up three hours of their GPS data. In the second block, participants indicated how much of a good/service (either Amazon movie downloads, Starbucks medium beverages, etc.) they would demand to give up the same three hours of GPS data. In the final block participants indicated the monetary amount at which they valued the good/service determined in block 2. The order of the blocks was randomized and the good/service chosen was determined in a pre-survey based on which good/service participants would most like to receive. Participants were also told that 1 in 100 people would be drawn to have an actual choice made in the experiment enacted. We found that participants valued three hours of their GPS data at a lower rate (£36.77) when exchanging the data for goods/services than when exchanging them for money (£45.12).

Study 2 was a pre-registered replication of Study 1 with a larger sample size (N=301) and lower incentives (such that participants faced a 1 in 300 chance of being drawn to have one of their choices enacted). Despite these lower incentives, the results were substantively identical, suggesting that our findings are not sensitive to the experimental incentive structure.

The purpose of Study 3 (N=603, pre-registered on aspredicted.org) was to examine our proposed mechanism for the results of Studies 1 and 2. Namely, we hypothesized that these results were driven by individuals' inexperience in valuing their private information. To test this, we recruited a participant sample from Amazon MTurk and implemented the same design as Study 1 but added a between-subjects element, in which participants considered the relevant tradeoffs either with giving up three hours of their GPS data (privacy condition) or the performance of a three-hour MTurk image coding task in mind (labor condition). We chose the latter because we expected MTurk participants to be well-practiced in valuing their labor on the site, which should diminish the intransitivity relative to that hypothesized in the privacy condition. In the privacy condition, participants valued their private data higher (M=$57.89) when

exchanging them for money than when exchanging them for goods/services (M=$48.15), whereas there was no such difference in the labor condition (M=$46.09 versus M=$45.24)

In summary, this research provides evidence that individuals exhibit systematic errors when attempting to value their privacy. This also suggests that inefficiencies may be common in the ever-growing market for personal data.

From Privacy Concern to Privacy Mindsets

EXTENDED ABSTRACT

Foundational to extant privacy research is the notion of privacy concern, which describes apprehension about the potential acquisition and use of one's personal information. As the measurement of privacy concern has evolved, different typologies have been developed.

Some privacy typologies classify *individuals* by the degree of privacy concern they exhibit. For example, according to a popular "Privacy Segmentation Index" developed as part of a series of ongoing privacy surveys by Alan Westin, individuals are classified into one of three segments: fundamentalists, who consistently exhibit high privacy concern; unconcerned, who consistently exhibit low privacy concern; and pragmatists, who exhibit inconsistent levels of privacy concern (Kumaraguru and Cranor 2005).

Other typologies classify *information* (rather than people) by the degree of privacy concern it elicits. For example, one study classifies information (e.g., height, cell phone number, salary history, and credit card number) into four categories ranging from public information to highly sensitive information (Tsai, Cranor, Acquisti, and Fong 2006).

Inherently implied in typologies is an assumption that individuals and information can be reliably categorized by stable traits. However, researchers have begun to question this assumption. For example, contextual integrity theory rejects the notion that individuals uniformly perceive certain types of information to be inherently more sensitive (Martin and Nissenbaum 2016), asserting instead that perceptions are context-dependent (Nissenbaum 2019). To illustrate, one may be willing to provide certain information in an app that they would not provide online. Similarly, a cell phone number may be considered sensitive information in one context but not another.

By acknowledging the malleability of privacy perceptions, such research constitutes a meaningful advance beyond static typologies. Yet, privacy concern remains the focal construct of interest (Martin and Murphy 2017). Privacy concern originated as a way to consistently measure privacy, but has evolved to become a de facto conceptualization of privacy. This is problematic because privacy concern is limited in scope and does not represent the full breadth of privacy attitudes. It reflects a negatively-valenced, future-oriented, and reasoned attitude about the possible exposure of personal information, but fails to capture privacy-related attitudes which are positively-valenced, present-oriented, and heuristic in nature. Its measurement is often narrowly focused on reactions to information disclosure requests, neglecting other situations in which privacy is important and relevant (e.g., surveillance, digital tracking).

In response to these challenges and limitations, we propose that a more robust conceptualization of privacy is needed—one that acknowledges context-dependence and is broadly-applicable to all privacy situations.

Privacy Mindsets

We introduce privacy mindsets as a way to incorporate additional relevant dimensions of privacy and better understand the context-dependent interaction of individual and situational characteristics that shape attitudes towards the exposure of personal information. Specifically, privacy mindsets describe attitudes, beliefs, and knowledge structures concerning the self-initiated or other-initiated exposure or concealment of an individual's personal information and actions.

In general, mindsets are chronic or situationally-activated psychological orientations that, when accessible, affect the selection, encoding, and retrieval of information and drive evaluations, actions, and responses (Rucker and Galinsky 2016). Like other mindsets, the adoption of a privacy mindset can be chronic or situationally-activated, and may spill over to subsequent, unrelated tasks (Ülkümen, Chakravarti, and Morwitz 2010).

Privacy mindsets reflect three distinct psychological orientations that describe the interaction between individuals' sense of personal exposure and their sensitivity to changes in the objective level of personal exposure.

Vigilant: Irrespective of the objective level of personal exposure, adoption of a vigilant mindset results in a feeling of exposure and a belief of being monitored. Thus, in a sheltered environment, a vigilant mindset creates the illusion of surveillance, leading to impression management as one adjusts actions and curates information for an imagined observer. If having one's actions monitored or personal information accessed is undesirable, a sense of paranoia may be experienced. On the other hand, if a sense of being monitored or sharing personal information is regarded as positive, individuals may seek opportunities to perform for or share with an audience—real or imagined. Whether exposure is perceived as positive or negative, a vigilant mindset supersedes environmental conditions in determining one's behavior.

Relaxed: Irrespective of the objective level of personal exposure, adoption of a relaxed mindset results in feeling agnostic towards exposure. Regardless of whether personal data is sheltered or exposed, individuals with a relaxed mindset are not attuned to whether, how, and when their personal actions are being monitored and their information collected, accessed, and used. Like an innocent child who is ignorantly unaware of its vulnerability, individuals with a relaxed mindset may simply be naïve about the exposure of their personal information. Alternatively, they may be aware of exposure but lack the empowerment or motivation to change it.

Responsive: This orientation describes a state of mind in which individuals are sensitive to differences in the level of objective exposure and regulate their behavior accordingly. In an exposed environment, individuals who adopt a responsive mindset seek to protect personal information if sharing is regarded as negative, and seek to reveal personal information if sharing is regarded as positive. In a sheltered environment, a responsive mindset leads people to be more open and less guarded than in an exposed environment.

In contrast to typologies that attempt to classify individuals into a single segment, privacy mindsets are fluid states of mind that can be situationally-activated, such that the same individual may shift repeatedly between mindsets in different contexts. Of course, privacy mindsets may also be chronically adopted, such that one is predominant across most contexts.

Our conceptualization of privacy as a mindset answers previous calls for an expansion of the narrow focus on privacy concern that has dominated privacy research (Smith, Dinev, and Xu 2011). Incorporating psychological and environmental factors, privacy mindsets encompass the present as well as the future, account for positively- and negatively-valenced thoughts, and consider heuristic as well as reasoned judgments.

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The Modern Consumer: How New Technologies are Changing Consumer Behaviors and Interactions

Chair: Shiri Melumad, University of Pennsylvania, USA

Paper #1: Technology-Mediated Innovation
  Melanie S. Brucks, Columbia University, USA
  Jonathan Levav, Stanford University, USA

Paper #2: Full Disclosure: How Smartphones Enhance Consumer Self-Disclosure
  Shiri Melumad, University of Pennsylvania, USA
  Robert Meyer, University of Pennsylvania, USA

Paper #3: Dehumanization in the IoT: Experiential Consequences of Syntactically Constricted Human-Machine Interaction
  Christian Hildebrand, University of St. Gallen, Switzerland
  Donna Hoffman, George Washington University, USA
  Tom Novak, George Washington University, USA

Paper #4: Improving Civil Discourse: Speaking is a More Humanizing Form of Discourse Than Writing
  Juliana Schroeder, University of California, Berkeley, USA

SESSION OVERVIEW

Recent years have witnessed a rapid expansion in the types of technologies that consumers use to browse, consume, make decisions, and communicate. As an example, 77% of the adult population in the United States now owns a smartphone (Pew Research Center 2018), with the device being used not just for communication but also to perform almost all online activities. In addition, more than 20 billion smart objects, such as Amazon Echo devices, are connected to the Internet (Howell 2017). These technological devices have even become increasingly interconnected, with consumers using smartphones to operate their smart technologies and automate behaviors and decisions they used to make themselves. The consequences for practitioners have been no less dramatic: whereas firms were once mostly confined to in-person interactions with customers, these communications are now increasingly conducted through a constellation of textual, visual, and other virtual media.

The goal of this special session is to shed light on a burgeoning field of research on the psychological consequences of consumers' engagement with new technologies. The session will be comprised of four papers that explore two central questions in this area:

1. How might new technologies be changing consumer behavior and decision-making?
2. Under which conditions, and to what extent, are new technologies enhancing or harming consumer well-being?

The first two papers in this session explore this first question. Melanie Brucks and Jonathan Levav explore how video-conferencing affects collaboration processes in new product development. They find that while video conferencing curtails the number of new ideas generated, it facilitates identification of the best idea. Next, Shiri Melumad and Robert Meyer investigate how consumers' increased reliance on their smartphone may be affecting user-generated content in a way that has important policy implications. The authors find that consumers tend to disclose information that is more sensitive or personal when generating content on their smartphone versus PC.

The third and fourth papers then explore the second key question of the session, with a particular focus on the relationship between new technologies and humanization. Christian Hildebrand, Donna Hoffman, and Tom Novak examine how the constricted nature of verbal communication that typically marks consumers' interactions with IoT devices (e.g., Amazon Alexa) acts to dehumanize such interactions, reducing consumers' overall satisfaction with IoT experiences. Finally, the session concludes with work by Juliana Schroeder, who explores a different aspect of humanization: that which arises when consumers engage in conflict via text or in person. She finds that while consumers turn to text-based communication in the belief that it will deflate conflict with an ideological opponent, such interaction instead acts to dehumanize conversants and thus inflate the degree of conflict.

We believe that this session will contribute to the conference by showcasing research on human-technology interactions, an increasingly important topic that spans disciplines such as psychology, sociology, anthropology, and computer science. We hope that consumer researchers will play a major role in this field as it continues to develop, and that this session will illustrate the potential research opportunities in this area.

Technology-Mediated Innovation

EXTENDED ABSTRACT

The move to virtual teams is one of the most notable business trends of the last decade. 43% of people today work remotely (Gallup 2017), and 65% of firms now use distributed teams (Upwork 2018). Underlying this shift to remote work are new technological advances that enable virtual collaboration, such as video-conferencing. The implicit presumption is that these technologies can replace face-to-face interaction. In the present research, we test this assumption for one of the most important collaboration processes in marketing: creating new products, where teams brainstorm nascent ideas and then select ideas to develop into proposals and/or prototypes. Importantly, these two tasks correspond to different psychological processes: while idea generation leverages expansive, unregulated thinking (Nijstad and Stroebe 2006), idea evaluation and selection benefits from analytical and deliberative thinking (Amer, Campbell, and Hasher 2016).

Does communicating in-person meaningfully differ from video-conferencing for these two processes of new product development? At first blush, it seems like the effect of communication modality should be quite trivial. Indeed, contingent on good internet connection and high-resolution display, video-conferencing closely mimics in-person conversation: it is synchronous (unlike email) and reveals almost identical visual and audio information about the partner (unlike phone calls). However, we propose that an important difference lies in the shared environment: In-person teams share the entire room while, over video, teams only share the screen in front of them. Consequently, virtual teams should primarily look at the video screen, as the majority of the room is not accessible to their partner. When virtual teams concentrate on the screen and filter out peripheral visual stimuli, their visual attention is narrowed (Wade and Tatler 2005). Drawing on research suggesting that cognitive states are sticky (Luchins 1942) and are often recruited for other tasks once activated (Malkoc, Zauberman, and Bettman 2010; Moreau and Engeset 2015), we posit that this narrow *visual focus* spills over into the new product development tasks and activates *cognitive focus*. Importantly, the focused cognitive state among virtual groups should suppress

the expansive thinking needed for idea generation but conversely bolster the analytical thinking used in idea selection.

We conducted two lab studies and one field experiment to test this hypothesis. In the first lab study, 150 dyads generated creative uses for a frisbee for five minutes and then selected their most creative idea for one minute. These tasks were incentive-compatible: each creative idea earned one raffle ticket for a $200 raffle and selecting the most creative idea (as scored by outside judges) earned five raffle tickets. Teams were randomly assigned to work together for these tasks either in-person or virtually (with their partner displayed via video across from them). Virtual teams generated significantly fewer creative ideas ($M = 6.17$) than in-person teams ($M = 7.36$, $p = .005$), but selected ideas that were more creative ($M_{virtual} = 4.71$, $M_{in-person} = 4.50$, $p = .043$, controlling for the creativity of the top idea).

We hypothesized that virtual communication affects new product development because the constrained environment of the screen fosters a focused cognitive state. In a second lab study, we explored the proposed mechanism by having 150 dyads generate uses for bubble wrap either in-person or virtually in a room populated with props. We captured environmental focus in two ways. First, participants recalled the props in the room, and second, we recorded and extracted participants' eye gaze throughout the task. If teams are more environmentally focused on the screen in the virtual condition, they should recall fewer objects in the room and their gaze should be more oriented towards their partner (the screen). Virtual teams again generated significantly fewer creative ideas ($M = 7.55$) than in-person teams ($M = 8.62$, $p = .020$), but selected a more creative idea overall ($M_{virtual} = 3.93$, $M_{in-person} = 3.72$, $p = .081$, controlling for the creativity of the actual top idea). Moreover, we found evidence that indeed the environmental focus was more constrained in the virtual condition. Virtual teams remembered significantly fewer props in the room ($M = 3.88$) than in-person teams ($M = 4.77$, $p = .009$), and virtual teams looked significantly more at their partner ($M_{virtual} = 102.90$ seconds, $M_{in-person} = 65.10$ seconds, $p < .001$) and less at the surrounding room ($M_{virtual} = 8.32$ seconds, $M_{in-person} = 26.11$ seconds, $p < .001$). Importantly, gaze mediated the effect of communication modality on idea generation (95% CIs: [-1.29, -.12]).

The lab results suggest that merely being in the same room as your partner (vs. communicating virtually) changes how the processes of idea generation and selection unfold. However, in order to make recommendations to firms, we wanted to test these effects in the field with domain experts who are invested in the outcome, know their partners, and regularly use the virtual technology in distributed teams. To do this, we ran an ideation workshop where 308 Nokia engineers generated ideas for an hour and then selected and developed one idea for 45 minutes either in person or over video-conferencing. At the end of the workshop, the teams submitted their developed proposals, and experts within Nokia evaluated the submissions. Because the experts only evaluated the submitted idea, to capture selection accuracy, we instructed teams to evaluate their own idea after it was submitted using the same criteria the company experts used. Teams who are more accurate in their evaluation should better match the experts. Replicating the lab, we find that engineers who worked together virtually ($M = 7.88$) generated fewer ideas than in person ($M = 9.10$, $p = .009$). In addition, we find that there is a smaller difference between the teams' self-evaluation and the experts' evaluation (thus the evaluation was more accurate) among virtual teams ($diff_{virtual} = .99$, $diff_{in-person} = 1.25$, $p = .039$).

We are facing unprecedented levels of virtual communication among consumers and within firms. While seemingly interchangeable with face-to-face interaction, our studies suggest that these communication technologies have important psychological conse-

quences: virtual interaction may undercut the value of collaborative brainstorming but can be leveraged for evaluation and development.

Full Disclosure: How Smartphones Enhance Consumer Self-Disclosure

EXTENDED ABSTRACT

The past fifteen years have witnessed two transformative trends in consumer markets: firms' reliance on user-generated content as a means of gaining insights into consumer preferences, and the emergence of the smartphone—rather than personal computer—as the primary platform on which this content is generated. In this research we explore a question that lies at the intersection of these two trends: might the transition away from PCs toward smartphones be altering what consumers reveal about themselves online? Using data from thousands of customer-generated online posts, as well as two controlled experiments, we offer evidence that it indeed might, and in a way that has important implications for both firms and policymakers. We show that consumers tend to exhibit greater depth of disclosure when writing on their smartphone (vs. PC).

In particular, we propose that writing on one's smartphone often lowers the barriers to revealing certain types of sensitive information due both to its unique form characteristics as well as the emotional associations consumers tend to hold with their device. The first pathway draws on social presence theory (e.g., Scheier and Carver 1983), arguing that its smaller screen (vs. PC) more narrowly focus consumers' attention on the disclosure at hand and away from their external environment, something that fosters greater private self-awareness. This heightened private self-awareness, in turn, enhances consumers' depth of disclosure on the device (e.g., Derlega, et al. 1993 Joinson 2001). The second pathway posits that consumers tend to associate their smartphones with more positive, intimate activities (e.g., texting with friends, entertaining themselves), which—combined with the fact that the device is virtually always with them—leads smartphones to represent a general source of psychological comfort for many consumers, which further drivers depth of disclosure on the device (e.g., Chaiken et al. 1976; Forgas 2011).

We test the main hypothesized effect as well as its underlying mechanisms across four studies. In the first two field studies we tested for differences in depth of self-disclosure across devices by drawing on a corpus of 369,161 Tweets referencing different "trending hashtags" (Study 1), and 61,643 restaurant reviews posted on TripAdvisor.com (Study 2). Depth of disclosure was measured using both automated natural-language processing tools and human judges. For the automated analysis we measured the relative presence of linguistic markers that had been found in previous research to be associated with greater self-disclosure, including use of first-person pronouns, references to family and friends, and more authentic writing styles (e.g., Davis and Brock 1975; Houghton and Joinson 2012). To collect human judgments we recruited MTurk participants to judge the depth of disclosure (measured as the index of four items on a seven-point scale) in a subset of 4,485 Tweets (Study 1) and 10,185 restaurant reviews (Study 2).

The results confirmed that consumers generated content that was more self-disclosing on their smartphones than on their PCs. For example, across seven topical domains (e.g., news, entertainment), Tweets were more likely to have been written on a smartphone if they were written in a more disclosing, authentic style ($M_{Smartphone} = 28.73$ vs. $M_{PC} = 21.49$; $F(1, 369148) = 235.30$, $p < .001$), and were perceived by human judges as more self-disclosing ($M_{Smartphone} = 3.25$ vs. $M_{PC} = 3.07$; $F(1, 7821) = 41.32$, $p < .001$). These results were conceptually replicated in the substantively different domain of TripAdvisor,

where restaurant reviews written by customers on their smartphones were not only more disclosing based on automated measures and human judgments, but were also viewed as more persuasive by outside readers ($M_{Smartphone}$=4.97 vs. M_{PC}=4.78; F(1, 9861)=36.62, p<.001).

The next two experimental studies tested the hypothesized mechanism underlying the effect: that engagement with one's smartphone (vs. PC) focuses users more on the disclosure and, in turn, heightens private self-awareness, and also elicits greater feelings of psychological comfort. In Study 3, 714 members of a Qualtrics panel were randomly assigned to use their smartphone or their PC to write about an upsetting personal experience. After completing this, participants were asked to use the same device to respond to a series of questions measuring the proposed drivers of the effect: degree of focus on the disclosure task, private self-awareness, and psychological comfort.

Consistent with the prior results, descriptions written by participants on their smartphones were rated by MTurk judges as displaying greater depth of disclosure than those written on PCs ($M_{Smartphone}$ = 4.51 vs. M_{PC} = 4.17; F(1, 3401)=16.97, p<.001). Critically, a mediation analysis confirmed a significant positive effect of smartphone (vs. PC) use on degree of focus ($b_{Device\rightarrow Focus}$=.05; t=2.35, p<.001), a significant positive path from focus to private self-awareness ($b_{Focus\rightarrow PrivateSA}$=2.14; t=2.29, p<.001), and a significant positive path from private self-awareness to depth of disclosure ($b_{PrivateSA\rightarrow Disclosure}$=.05; t=2.37, p<.001). Likewise, the analysis supported the parallel positive path from smartphone (vs. PC) to psychological comfort ($b_{Device\rightarrow Comfort}$=.05; t=2.06, p<.001), and a positive path from comfort to depth of disclosure (standardized $b_{Comfort\rightarrow Disclosure}$=.09; t=3.78, p<.001). Finally, the results showed a significant total indirect effect of smartphone (vs. PC) use on depth of disclosure through the parallel paths of focus, private self-awareness, and psychological comfort (total indirect effect: b=.01; t=2.81, p=.008).

In the final experiment we replicate these findings among a different form of consumer disclosure. Mirroring the procedure of Study 3, 1,389 Qualtrics participants were again randomly assigned to complete the study on their smartphone or PC and this time were asked to describe a product purchase they considered to be private or embarrassing. The main dependent measure was now whether participants complied with the request or opted out of doing so. Participants then responded to the same measures of focus, private self-awareness, and psychological comfort as in Study 3.

The results conceptually replicate those of Study 3, both for willingness to describe the product and depth of disclosure in the descriptions (conditional on compliance). For example, whereas 89% of participants who responded on their smartphones were willing to discuss the embarrassing product, 84% were willing to do so on their PC (Chi-square 6.88, p=.009). Likewise, the descriptions provided by those who complied were more disclosing when written on smartphones versus PCs (human judgments: $M_{Smartphone}$=4.83 vs. M_{PC}=4.70; F(1, 4741)=13.41, p<.001).

Dehumanization in the IoT: Experiential Consequences of Syntactically Constricted Human-Machine Interaction

EXTENDED ABSTRACT

The use of natural language and voice-based interfaces gradually transforms how consumers interact with firms (Hirschberg and Manning 2015). Voice-based interfaces as a new interaction paradigm between human consumers and Internet of Things (IoT) devices like Amazon Alexa, Google Home or Siri has been declared the "next operating system in commerce" (Feldman, Goldenberg, and Netzer 2010). With 100 million digital voice assistants installed in consumers' home worldwide in 2018, voice-based interfaces are transforming how humans search, shop, and automate the tasks in their daily lives.

Research on the impact of voice-based interaction modalities on consumers is both scarce and predominantly concerned with design, security, or general technology-acceptance issues rather than with the consequences for consumer behavior. Specifically, the majority of prior work on voice-based or "conversational" interfaces has primarily examined either factors related to design feature optimization (Ghosh and Pherwani 2015), security (Diao et al. 2014)such as camera, microphone and GPS. These approaches get data from sensors directly and need corresponding sensor invoking permissions. This paper presents a novel approach (GVS-Attack, or general user acceptance (Portet et al. 2013)this calls for techno- logical solutions that suit their specific needs and capabili- ties. The SWEET-HOME project aims at developing a new user friendly technology for home automation based on voice command. This paper reports a user evaluation assessing the acceptance and fear of this new technology. Eight healthy persons between 71 and 88 years old, 7 relatives (child, grandchild or friend.

The current work takes a different route and explores whether the input or task initiation modality (i.e., the words consumers are required to use to command the conversational interface) can systematically alter consumers' subjective task experience and their underlying attributions toward the interface. Building on recent conceptual foundations of consumer-smart-object experiences during IoT interactions (Hoffman and Novak 2018; Novak and Hoffman 2018), we examine how constricted task initiation modalities during human-object interaction can evoke more negative task experiences, more negative attributions toward the voice-based assistant, and even systematic changes in the vocal expressions consumers make when they issue spoken commands.

To explore whether and how variation in task initiation modalities affects consumers' task experiences, we recruited 100 participants for a laboratory study in exchange for monetary compensation (M_{Age}=24.27, SD_{Age}=6.28, 51% females). At the outset of the study, we assessed participants' baseline vocal features using an established reading task from prior work in bioacoustics (Kempster et al. 2009; e.g. "The blue spot is on the key again."). Next, participants were randomly assigned to either a constricted versus non-constricted task initiation modality condition. In both conditions, participants were asked to state a set of eleven commands that required them to engage in a turn-taking exercise with Amazon Alexa. The two conditions differed systematically in the level of constriction: In the constricted modality condition participants received eleven commands that required a syntactically shortened form of interaction (e.g. "Alexa, length of marathon."). In the non-constricted condition, participants received the same substantive commands but all were phrased in terms of a more natural conversation (e.g. "Alexa, can you tell me the length of a marathon?"). All commands were pretested to guarantee they led to identical responses of the voice assistant independent of task initiation modality. Next, participants were asked to rate: the perceived naturalness of the interaction ("The interaction with this interface felt …. natural / robotic(r) / lacking depth (r)", $\alpha_{natural}$=.79), their overall task enjoyment ("This task was a lot of fun"), attributions of competence ("This system is … an expert / competent / proficient", α_{comp}=.81) and warmth ("This system is … compassionate / sympathetic / warm", α_{warmth}=.85). Finally, they responded to a set of demographic questions. The audio data of the baseline reading task and the object-interaction task was recorded using an external BlueYeti microphone with a predefined sampling rate of 44100 HZ.

Processing of all audio data and extraction of vocal features at the participant level was done using the seewave and tuneR packages in R (Sueur, Aubin, and Simonis 2008).

As predicted, the results revealed that the constricted task initiation led participants to perceive the voice-assistant interaction as significantly less natural ($M_{Constrict}$=3.70, $M_{Nonconstrict}$=4.43; t(98)=2.654, p<.01). Participants in the constricted task condition also enjoyed the task significantly less than the non-constricted condition ($M_{Restrict}$=4.18, $M_{NonRestrict}$=4.96; t(98)=1.675, p=.09). A mediation analysis also confirmed that the effect on task enjoyment was offset after controlling for the effect of perceived naturalness on task enjoyment (5000 bootstrap resamples; $CI_{95\%}$=[.07;.94]), indicating full mediation. Greater perceived naturalness was also a key factor in predicting greater attributions of both competence ($\beta_{Natural}$=.36, t(98)=3.83, p<.001) and warmth ($\beta_{Natural}$=.74, t(98)=8.60, p<.001). A series of Davidson MacKinnon tests for non-nested models further revealed that including the fitted values of the attribution dimensions (competence and warmth) led to a significant improvement of model fit ($\theta_{Natural+Fitted(CompWarmthModel)}$ = .92, t = 4.413, p<.001) whereas including the fitted values of naturalness only model did not further improve the fit of the model ($\theta_{CompWarmth+Fitted(NaturaModel)}$ = .17, t = 0.575, p>.56), indicating that the attributions toward the system (evoked through perceptions of a more natural task experience) led to the increased task enjoyment.

The task-initiation manipulation also significantly altered participants' vocal expressions. We find that constricted (vs. non-constricted) task initiation led to an increase in sound pressure levels relative to the baseline measure of the reading task (t(98)=10.917, p<.001) and the between-subjects comparison of the object-interaction task ($M_{Restrict}$=8.9052, $M_{NonRestrict}$=8.9044; t(98)=3.242, p<.01). Similarly, constricted versus non-constricted task initiation also significantly increased participants' vocal entropy relative to the baseline measure (t(98)=13.819, p<.001) and during the object-interaction task ($M_{Restrict}$=.69, $M_{NonRestrict}$=.66; t(98)=4.167, p<.001). These findings suggest that constricting the structure of the task causes individuals to engage in a higher pitch and less fluent (or even "mechanistic") vocal expression during speech formation. This change in individuals' vocal features was also reflected in a significant, negative correlation between perceptions of naturalness and vocal entropy (r(98)=-.64, p<.001), confirming that the less fluent vocal expression was also associated with lower task enjoyment. Robustness tests to explore boundary conditions also support our main hypotheses, but are not reported here in the interest of space.

To our knowledge, this is the first work documenting that altering the input modality of how consumers interact with smart objects systematically affects their IoT experience. We provide evidence that altering the required input to initiate a conversation with smart objects provokes systematic changes in terms of objective phonetic vocal changes and, more importantly, consumers' subjective experiences.

Improving Civil Discourse: Speaking is a More Civil Form of Discourse Than Writing

EXTENDED ABSTRACT

Political intolerance in the United States is at record levels. According to the Pew Research Center, in 2014 members of both political parties were more than twice as likely to report that the other party is a "threat to the nation's well-being," compared to 1994. Increasingly, people don't just disagree; they also distrust, dislike, and even despise those who see the world differently.

Exacerbating this problem, some evidence suggests that people are withdrawing from conversations with opposing party members. In 2016, just 6% of Americans reported having "many" close friends from the opposing party. Moreover, social media may increase ideological "echo chambers" in which people only interact with those who share their opinions.

What's the solution? Many organizations are currently trying to encourage civil and respectful conversation among people who disagree, so that they can exchange their opinions and resolve differences. For example, Living Room Conversations, founded in 2010, "encourages conversation with those with whom we may not agree… to increase understanding and reveal common ground." Another example is Pnyka, founded in 2017, a communication platform that "bridges divided communities by using respectful interactions." But a major difference in how organizations are pursuing this solution is that some of them host conversations online (e.g., Pnyka) whereas others insist on hosting only in-person or video-chat conversations (e.g., Living Room Conversations).

This provokes an important psychological question: How does the communication medium of a conversation influence the civility of the discourse? The extant literature suggests that spoken (versus written) conversation may increase civility for at least three reasons: first, the paralinguistic cues in voice provide insight into a communicator's thoughts and feelings (Schroeder & Epley, 2015, 2016; Schroeder, Kardas, & Epley, 2017), second, speaking is a more synchronous and "richer" medium (Daft & Lengel, 1984), and third, speaking includes more back-channeling (i.e., feedback that conveys understanding; Tollins & Fox Tree, 2014, 2016).

To test whether lay individuals share this intuition, two initial experiments (Exps. 1 & 2; n=800) asked people to predict how having a ten-minute conversation with an ideological opponent via video-chat, phone, or writing (three conditions, within-subjects design) would change their assessments of the opponent and their experiences. Predictors tended to believe that the written conversations would be more civil—more shared understanding, less conflict, and more enjoyable (ps<.01)—compared to phone or video-chat conversations (ps<.01), although they expected no differences in how much they would perceive their opponent (i.e., how thoughtful, competent, and reasonable the opponent seemed) or change their own attitudes across conditions (ps>.250). Overall, predictors reported a strong preference to write (M=80%) compared to talk or video-chat (M=20%).

We next tested whether these beliefs are correct in five more experiments. Experiments 3-6 each utilized a similar procedure whereby participants were matched based on disagreement according to pre-selected controversial topics, engaged in a 6 to 12 minute conversation (depending on the experiment) with an ideological opponent, and then reported conversation civility—humanization of their conversation-partner, attitude change, felt understanding, and conflict—in a post-conversation survey.

In Experiment 3 (n=358), pairs interacted either by video-chatting, speaking (audio-only), or writing (three between-subjects conditions). Contrary to the predictions in Exps. 1-2, these participants reported engaging in more civil interactions with their partner when video-chatting or speaking versus writing (ps<.01), but there was no difference in civility between video-chatting or speaking (p>.250).

Because participants produce about twice as many words in spoken versus written conversations, Experiment 4 (n=796) next manipulated how long pairs conversed in a 2(speaking vs. writing) x 2(6-minute vs. 12-minute conversations) between-pair design. We replicated the effects from Exp. 3 such that the conversations were generally more civil when speaking (vs. writing), regardless of how

much time they spent conversing. There was no effect of time on any outcome variable.

Experiment 5 (n=396) attempted to control for synchronicity between communication-media by using a 2(speaking vs. writing) x 2(dialogue vs. monologue) between-pair design. The dialogue condition used the same procedure from Exps. 3 and 4 but the monologue condition only allowed pairs to exchange opinions once. Results revealed that, even in the monologue condition, spoken conversations were more civil than written conversations (i.e., more positive impressions partner, more felt understanding, less conflict). This effect of communication-medium also replicated in the dialogue condition such that there was no statistical interaction between communication medium and synchronicity condition. A main effect of synchronicity condition also emerged; there was greater civility overall in the dialogue (vs. monologue) condition.

To further examine what is changing in the spoken versus written conversations, we asked 400 online observers to read transcriptions of the spoken or written "long" conversations from Exp. 2 (92 conversations total). Each observer reviewed just one conversation and then reported how much the pair understood, liked, and agreed with each other. Observers believed there was more understanding, liking, and agreement in the spoken (vs. written) conversations, suggesting that the effect of communication medium occurs even without hearing the interactants' voices.

A follow-up experiment (n=400) further considered the trajectory of the conversations by asking online observers to rate each "exchange" of opinion within a conversation separately. Results from this experiment revealed that observers could tell the difference between the spoken and written conversations almost immediately—by the second exchange of opinion in the conversation.

In aggregate, the results from these eight experiments suggest that, although people seem to prefer writing to (vs. speaking with) an opponent, in fact speaking is more civil form of discourse. Political opponents who had short spoken conversations reported having more positive impressions of each other, experiencing less conflict, feeling more understood, and being more open to each other's attitudes compared to opponents who had written conversations. These findings have important implications for how technology may shape discourse. People who disagree can easily interact via online forums (e.g., Reddit, Facebook), which may discourage them from conversing in-person. Further, these online interactions may subtly exacerbate conflict. Disagreement is born not just from harsh words exchanged but from the structure of the interaction itself.

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The Changing Face of Luxe:
Refocusing, Undermining, Moralizing Luxury

Chair: Yajin Wang, University of Maryland, USA

Paper #1: From "Wealth-as-Status" to "Value-as-Status:" The Millennial Luxury Consumer Mindset

Ludovica Cesareo, Lehigh University, USA

Vanessa Patrick, University of Houston, USA

Paper #2: Picasso, Monet, and Louis Vuitton: Appreciation of Arts Dampens Desire For Luxury Goods

Yajin Wang, University of Maryland, USA

Alison Jing Xu, University of Minnesota, USA

Paper #3: Hurts So Good: Status Products That Incur Environmental Costs are Preferred by Status-Striving Consumers

Morgan K Ward, Emory University, USA

Sara Loughran Dommer, Georgia Tech, USA

Darren Dahl, University of British Columbia, Canada

Paper #4: Do Fighters Wear Prada? Consumer Dominance Orientation and Desire for Luxury Brands

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Bruno Kocher, HEC Lausanne, Switzerland

SYMPOSIUM OVERVIEW

The growth of the luxury market (from a $80 to a $900 billion industry within the last two decades, reaching by now 450 million brand users) has been a significant consumer phenomenon. As luxury is moving from a concept associated with status elitism toward global brand appeal, luxury is exposing itself, and likely to be influenced by, new consumer trends, cultural associations, and social-moral issues. These developments seem to lead to a refocus and challenge of the very nature of luxury, raising new theoretical issues for consumer researchers. The four papers in this session address these conceptual issues and provide timely insight and novel findings on new consumers such as Millennials and explore new marketing strategies and approaches in luxury retail, product design and promotion.

The first paper examines what Millennials, the new consumers of luxury goods, value and care about in luxury consumption. Three experiments show that the role of luxury brands as status has *not* fundamentally changed for Millennials. What has changed, however, is what constitutes "status." For Millennials, luxury is used as expression of their values. Thus, luxury is not wealth-as-status, but rather values-as-status.

The second paper explores how the increasing collaborations between arts/artists and luxury retail can impact consumers' desire for luxury goods. Two field studies and four experiments demonstrate counter-intuitively that the appreciation of art decreases consumers' desire for luxury brands. Viewing art seems to induce feelings of transcendence and therefore lead to a decrease of desire for status products such as luxury goods.

Ethical concerns (i.e., the damage or destruction of environmental resources to produce a luxury product) poses new challenges for luxury brands. The third paper examines this challenge and explores how consumers react to the environmental costs of production of luxury goods. Four experiments show that for status-striving consumers, the environmental costs of production make status products more, rather than less, appealing. This is because such products enable consumers to reach higher social status by feeling dominant.

The final paper in this session focuses on a new promotion strategy, the use of aggressive imagery, to investigate when and why aggressive (vs. neutral) imageries may increase consumers' desire for luxury brands. Three experiments show that using aggressive imageries increases the attractiveness of luxury brands among consumers low in dominance. This is because low-dominance (but not high-dominance) orientation consumers see in aggressive luxury brands a promise of empowerment.

Taken together, this session shows how researchers need to deconstruct—and reconstruct—luxury and the constructs associated with it in contemporary consumer society. The set of papers thus opens up several new avenues of research in the area of luxury and status consumption. Each paper includes several experiments and provides process evidence for the proposed constructs, which can stimulate new research and provide practical insights in the area of luxury and status consumption. Given the variety of settings and broadly relevant questions, this session is likely to have wide appeal, attracting conference scholars interested in status goods, social signaling, and branding.

From "Wealth-as-Status" to "Value-as-Status:"
The Millennial Luxury Consumer Mindset

EXTENDED ABSTRACT

For luxury marketers, attracting the new Millennial consumer is key to achieving sustained growth for the luxury brand. Bain & Company and Farfetch (2017) report that Millennials will represent 40% of the market by 2025. This "Millennial generation" are a challenge for luxury marketers since they question the foundation from which they operate. As Kapferer (2015, p. 1) states "luxury is an industry like no other: it is the only one for which growth creates a problem". This raises the question: What *do* Millennial consumers care about?

The marketing literature has argued that luxury brands are "good" signals of status. Luxury brands are a means by which to indicate where one is on the social ladder, and where one intends to go (Belk, Bahn, and Mayer 1982; Amaral and Loken 2016). This literature argues that while luxury status signals may be conspicuous (Han, Nunes, and Dreze 2010) or inconspicuous (Berger and Ward 2010), luxury brands help consumers gain social approval and fit in with their social group (social-adjustive function) (Wilcox, Kim, and Sen 2009). And yet, signals of status seem to be changing. Recent literature suggests that larger-sized food and drink options (Dubois, Rucker, and Galinsky 2012), non-conforming behaviors (Bellezza, Gino, and Keinan 2014), and "busyness" (Bellezza, Paharia, and Keenan 2017) serve as new symbols of status. Germane to this research is the finding that status can be achieved by engaging in more prosocial behaviors (choosing green alternatives; Griskevicius et al. (2010)).

Integrating these new theories of status with the functional theories of attitudes (Katz 1960; Shavitt, Lowrey, and Han 1992), the current research seeks to explain why luxury consumers (Millennial versus not) are drawn to luxury brands. Wilcox et al. (2009) demonstrated that attitudes serve important social functions allowing consumers to express their central values (value-expressive function) or to help them gain social approval (social-adjustive function). In the current research, we begin with the hypothesis that the functional role of luxury (social-adjustive) that is provided to consumers, Mil-

lennials or not, has *not* fundamentally changed. However, *what* is signaled – i.e., what constitutes "status" – has likely changed. We therefore expect that while other cohorts use luxury to signal "wealth as status", the basis for the social-adjustive function of luxury brands for Millennials is rooted in core Millennial values, i.e., "values as status" (Sim 2018).

Three experiments support our theorizing. In a pilot Study (N = 100, Mturk, 57% female), we recruited Millennial, Gen X, and Boomer consumers who owned at least one luxury product to determine motivational differences in luxury purchases across generations; specifically, we asked the extent to which brand name, uniqueness[1], social-adjustive and value-expressive motivations (Wilcox et al. 2009) drove their purchase. Interestingly, we found no significant differences suggesting that even though the expressive and signaling functions haven't changed, *what* is signaled, however, could be different for Millennial consumers.

To test this assumption, in Study 2 (N = 188, University Laboratory, 53.7% female), we employed a 2x2 design by manipulating both generational values (GV; Millennial vs. Non) and luxury perceptions (Traditional vs. Sustainable). We manipulated GV by having Millennial participants imagine they were thinking of purchasing a trip either for themselves (graduation present) or for their parents (25th wedding anniversary gift). We manipulated GV by creating mock websites for "Arete," a luxury hotel in Greece, but described the hotel as a traditional (e.g., Michelin-star rated chef) vs. sustainable (e.g., locally sourced organic ingredients) luxury hotel. Participants reported (al 1-7 scales) purchase likelihood for the trip, their brand attachment to and brand love for the Arete brand, and if they wanted to be contacted by a reservation specialist to help them plan the trip in the future. A two-way ANOVA on purchase likelihood found a marginal main effect of luxury type ($M_{traditional}$ = 4.49 vs. $M_{Sustainable}$ = 4.88, $F(1, 184)$ = 2.882, p = .091), a main effect of GV ($M_{Millennial}$ = 4.42 vs. $M_{NonMillennial}$ = 4.95, $F(1, 184)$ = 5.150, p = .024), and a significant interaction ($F(1, 184)$ = 12.536, p = .001) such that when participants were purchasing for themselves, they were more likely to buy the trip when the hotel was framed as sustainable luxury ($M_{Millennial\_Sustainable}$ = 5.02 vs. $M_{Millennial\_Traditional}$ = 3.82, $t(89)$ = 3.509, p = .001), while they were more likely to buy the trip for their parents when the hotel was framed as traditional luxury ($M_{NonMillennial\_Sustainable}$ = 4.73 vs. $M_{NonMillennial\_Traditional}$ = 5.16, $t(95)$ = -1.377, p = .172). A moderated mediation analysis (Hayes 2013, Model 8) with GV as the independent variable, luxury type as the moderator, brand attachment as the mediator, and purchase likelihood as the dependent variable, demonstrated that brand attachment mediated the effect of luxury type on brand attachment, but only for the Millennial consumer when the hotel was framed as sustainable luxury (index of moderated mediation: [CI_{95}: .058; .915]; indirect effect when luxury = sustainable: b = -.400, SE = .195, CI_{95} = -.841; -.081). We found a similar pattern of results for brand love (interaction: $F(1, 184)$ = 5.653, p = .018), and whether they wanted to be contacted by a reservation specialist in the future (interaction: $F(1, 184)$ = 4.038, p = .046). This study supports our theorizing that Millennials use luxury as a way to obtain status by signaling salient values for their cohort.

Finally, to assess whether this "values-as-status" framework applies to all vs. only luxury consumption, in Study 3 (N = 141, University Laboratory, all female Millennials) we randomly assigned participants to either a luxury (vs. non-luxury) condition, in which they read about a brand of luxury (vs. non-luxury) skis. We repli-

cated the main effect of luxury on social-adjustive motivations, such that the participants who imagined owning the luxury pair of skis were more likely to exhibit social-adjustive motivations relative to the participants imagining the non-luxury pair of skis (M_{luxury} = 4.43 vs. $M_{Nonluxury}$ = 3.48, $F(1, 139)$ = 11.826, p = .001). Participants in the luxury condition exhibited higher brand attachment than participants in the non-luxury condition (M_{luxury} = 2.91 vs. $M_{Nonluxury}$ = 2.44, $F(1, 139)$ = 4.587, p = .033). A mediation analysis (Hayes 2013), demonstrated how the social-adjustive motivations mediated the effect of luxury consumption on brand attachment [CI_{95}: 081; 360].

Taken together, these findings suggest that Millennial luxury consumers purchase luxury to convey status, but not wealth-as-status, but rather values-as-status.

Picasso, Monet, and Louis Vuitton: Appreciation of Arts Dampens Desire for Luxury Goods

EXTENDED ABSTRACT

The high-end fashion market has witnessed increasing collaborations between arts and luxury brands. Ermenegildo Zegna, an Italian luxury fashion house that specializes men's clothing and accessories, initiated the ZegnArt project in 2012, supporting artists across the globe and exhibiting their artworks in Ermenegildo Zegna's retailing stores around the world. Other brands, such as Cartier, Louis Vuitton, Gucci, and Prada, operate their own museums to preserve their brand heritage and promote the brand. The above efforts of bringing art experiences into high-end shopping are with the hope that artistic retail environment and luxury goods can create positive synergies. However, little work has investigated the real impact of art experience on consumers' reactions towards luxury consumption. One stream of research found that incorporating art into the design of the product (e.g., package of the product, the advertising) would have a positive impact on consumer perceptions and evaluations of the product (i.e., art infusion effect; Hagtvedt and Patrick 2008a). Such positive effect occurs because the artworks activate connotations of luxury and exclusivity, which spills over to enhance the perceived luxury of the product (Hagtvedt and Patrick 2008a). In this and other related work on the transfer of luxury from perceptions of artworks to perceptions of products (Hagtvedt and Patrick 2008b), the artworks need to be an integral part of the product itself or part of its brand image. However, little evidence is available to show how the presence of artworks in a luxury retail environment, which are not part of the product itself, may influence consumers' consumption behaviors. The present research fills in this gap in literature and investigates the influence of exposure to unrelated artworks on consumers' desire to consume luxury products.

We propose that appreciating artworks can elicit a feeling of self-transcendence, which refers to the experience of perceiving expanded boundaries of the self (Reed 1991; Schwartz 2012). This experience allows people to feel connected to the larger context of existence and perceive the self to insignificant. As a result, this feeling of self-transcendence may undermine the need for self-enhancement, which has been established to drive luxury consumption. We also propose that activating pragmatic goals while view artworks (such as judging the market value of artworks or analyzing the technical details of artworks) interferes with the art appreciation experience, and thus, attenuate the proposed effect.

We conducted one pilot study, two field studies, and four additional lab studies to test our hypotheses.

In the pilot study, participants either visited an art gallery or a student center (control) on campus. Upon touring around, participants responded to a scale assessing their feelings of self-transcen-

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[1] We chose these motivations as they were indicated as the most important attributes used by female millennial Internet users in a recent eMarketer 2017 report. Future studies can include a broader values assessment (Schwartz 1994).

dence (e.g., I feel that my individual life is a part of a greater whole; I feel free from daily utility concerns). The results revealed that participants expressed stronger feeling of self-transcendence after viewing artwork in the art gallery than those in the control group did (*p* < .03). Therefore, appreciating artworks indeed induced feelings of self-transcendence.

Building on the pilot study, the first field experiment tested the influence of viewing an art exhibition in a subway station on consumers' choice to browse either the website of a luxury shopping mall or that of a regular shopping mall. The results provided initial support to our hypothesis by showing that viewing (vs. not viewing) famous artworks decreased consumers' likelihood of browsing the website of the luxury shopping mall (*p* < .03).

The second field experiment surveyed consumers' interest in receiving promotional materials from either luxury or non-luxury brands (i.e., in forms of choice) before or after exposure to a real, artistic shopping environment. Consistent with the findings in experiment 1, experiment 2 showed that consumers were less likely to choose to receive promotional materials from luxury brands (vs. non-luxury) brands after (vs. before) being exposed to an artistic shopping environment (*p* < .01). Experiment 2 also included control conditions showing that exposure to a non-artistic shopping environment did not affect consumers' choice between luxury and non-luxury brands (*ns*).

Experiment 3 and Experiment 4 provided additional support for our hypothesis in more controlled lab settings using a behavioral measure and an incentive compatible measure. In these experiments, participants viewed either images of artworks or images of photographs that were matched on the content. Then, they designed luxury products by drawing logos luxury brands on them or chose a gift card that is either from luxury or regular brands. The results revealed that after viewing artworks (vs. viewing non-artistic photographs), participants drew smaller logos in product design (*p* < .02) and were more likely to choose the regular (vs. luxury) brand gift card, reflecting their reduced desires to consume luxury products (*p* < .02).

We further tested our theorizing by exploring important boundary conditions in Studies 5 and 6, both of which dampened the feeling of self-transcendence and erased the effect. Specifically, in addition to manipulating viewing or art vs. non-art images, Experiment 5 primed thoughts about the market value of artworks (vs. no prime) and Experiment 6 manipulated attention to technical details of artworks while viewing them (vs. not). The results showed when pragmatic goals were *not* primed, the negative effects of art appreciation on desire for luxury goods were replicated (*p*s < .01 for the simple effect of art in both studies). However, priming of pragmatic goals interfered with art appreciation process to remove the feelings of self-transcendence, and consequently muted the negative impact of viewing art on consumers' intention to shop and consume luxury products (ns for the simple effect of art in both studies; *p*s < .05 for goal prime x art interaction in both studies).

Hurts So Good: Status Products That Incur Environmental Costs are Preferred by Status-Striving Consumers

EXTENDED ABSTRACT

Consumers often face an ethical dilemma when considering the purchase of status products (Griskevicius, Tybur, and Van De Bergh 2010) because of the negative environmental impact necessary to their production. Notwithstanding the negative perception of the environmental and ecological toll of the production of status products, we propose that for some consumers, it is this very impact which makes the products appealing.

Humans' status hierarchies differ from those of other primates in several important ways, one of which is that the repertoire of dominance behaviors is greatly expanded beyond demonstrations of physical strength. Thus, dominance can be applied and understood symbolically. Specifically, products that have inputs that have explicitly destroyed, killed, or egregiously harmed a natural resource symbolically express the producer's (and by extension, the consumer's) dominance over another living being or resource.

Given that environmental costs symbolize one's dominance over the natural world, luxury products that incur such costs offer a potent symbol of social status because they represent not only prestige, but also dominance. The Dominance-Prestige account of status-striving (Henrich and Gil-White 2001) states that individuals may increase their social status by engaging in behaviors that express both prestige and dominance. Dominance entails behaviors that induce fear through intimidation (Chase et al. 2002), while prestige refers to the influence based on skills, access to material resources, or knowledge (Cheng and Tracy 2014). Thus, it is likely that individuals who are striving for status will be particularly attracted to products associated with *both* prestige and dominance, such as luxury products that incur environmental costs.

Research examining how product consumption relates to status finds that individuals striving for status are often attracted to luxury goods (Braun and Wicklund 1989; Wicklund and Gollwitzer 1981) or "prestige goods" in order to affirm desired identities (Ward and Dahl 2014). While luxury products universally represent prestige, we propose that the subset of luxury products that incur environmental costs are also emblematic of dominance and thereby represent both paths to social status. Therefore, we predict that consumers who are strongly motivated to attain social status will find luxury products known to incur environmental costs more appealing compared to products that do not incur such costs. The reverse should be true, however, for consumers who are less motivated to attain social status.

One of the consistent traits of status products is that consumers perceive them as scarce (Cialdini 1984; Dubois, Czellar, Laurent 2005). While some might view scarcity as the inevitable result of the environmental costs inherent in the production of luxury products, scarcity and environmental costs are orthogonal constructs. That is, there are environmental costs that do not result in scarcity and, conversely, certain scarce resources are not the consequence of environmental costs. Thus, we acknowledge the importance of scarcity in consumers' desire for luxury. However, in our studies controlling for scarcity perceptions did not change the pattern or significance of our results.

Study 1 was a 2 (environmental costs: high vs. low) x 2 (status-striving: high vs. low) behavioral study (n = 205). First, participants were instructed to write about why choosing status goods either makes sense (high status-striving condition) or does not make sense (low status-striving condition). After the prime, an RA asked participants to take part in a taste test for a luxury cold-pressed juice brand. Those who agreed read about juice made from Camu Camu fruit. Only in the high environmental cost condition were participants told that harvesting the fruit has a detrimental effect on the fauna and flora surrounding it. Participants were then given one-ounce samples of the juice, which was actually a mixture of several other juices. Participants endorsed the degree to which they liked the juice, found it desirable and thought it tasted good (1 = not at all/ 9 = very much; α = .94). Participants in the high status-striving condition found the juice with high environmental costs to be more appealing compared to the juice with low environmental costs (M_{HEC} = 6.97 vs. M_{LEC} = 5.93, F(1, 202) = 9.38, *p* = .002). This pattern was reversed in the

low status-striving condition ($M_{HEC} = 6.01$ vs. $M_{LEC} = 6.59$, $F(1, 202) = 2.64$, $p = .10$).

Study 2 manipulated one between-subjects factor (environmental costs: high vs. low) and measured status-striving (Eastman et al. 1999). Participants (n = 131) were told that the marketing department was working with the university bookstore to determine which kind of luxury chocolate squares they should carry. At each computer was 10 chocolate samples and a booklet offering information about the luxury chocolate. Only in the high environmental cost condition did participants read that cocoa farming contributes to deforestation and damage to wildlife habitats. Before leaving, participants were told they could take as many chocolate samples from their stations as they liked. RAs recorded how many chocolates participants took (0-10). Approximately two weeks later, a follow-up email survey measured status-striving (Eastman et al. 1999) and other demographics. For high status-strivers (+1 SD), the presence of high environmental costs caused an increase in the number of chocolate samples taken ($\beta = .43$, $p = .0002$). For low status-strivers (-1 SD), the presence of high environmental costs caused a decrease in the number of chocolate samples taken ($\beta = -.33$, $p = .03$).

Study 3 examines our hypothesized dominance process via moderation. We conducted a 2 (environmental cost: high vs. low) X 2 (dominance: validated vs control) between subjects design with status-striving measured. First, participants (n = 323) were primed by writing about a time that they had felt dominant (dominance validated condition) or to describe their typical morning routine (control). Then, they were instructed to read a passage about how snakeskin is procured for luxury accessories. In the high (low) environmental cost condition we included information that the snakes were killed for their skins (molted their skins). Then all participants rated a black luxury "weekender" bag made of snakeskin on how attractive, appealing, and desirable the bag was (1 = not at all/ 9 = very much; $\alpha = .91$). Finally, they completed the same status-striving scale used in Study 2 (Eastman et al. 1999).

In the control condition, where dominance had not been validated, we continue to find a significant and positive effect of environmental costs at high status-striving (JN point at +1.66 SD), and a significant and negative effect of environmental costs at low status-striving (JN point at -.45 SD). Our prediction was that when status-striving participants are validated in their feelings of dominance, they would find status products that incur high environmental costs to be less appealing, as they no longer need to consume items that represent this personal quality. In the high environmental cost condition, the effect of the dominance manipulation on product appeal was negative and significant at high levels of status-striving (JN point at +.42 SD).

In Study 4, we investigate whether our results are the outcome of environmental costs or simply a function of the excessive effort required to create the product. Given our theorizing regarding the role of dominance, we predict that our effects will be attenuated when the production process does not incur environmental costs, as the item will not represent the desired trait of personal dominance. Study 4 was a 2 (procurement: environmental cost vs. excessive effort) x 2 (status-striving: high vs. low) between-subjects design. Participants (n = 198) began by completing the same status-striving prime used in Study 1. Then participants read an excerpt from a luxury magazine that discussed the procurement of cultured pearls. In the excessive effort condition, the article indicated that procuring the pearls is safe for the ecosystem, but requires an excessive amount of effort on the part of the producer. In the environmental cost condition, the article explained that to create cultured pearls, the ecosystems (where the oysters are found) are destroyed. After reading the article, participants rated a pearl brooch on how attractive, appealing, and desirable it was (1 = not at all/ 9 = very much; $\alpha = .82$). There was no effect of procurement in the low status-striving condition ($M_{EC} = 5.08$ vs. $M_{EE} = 5.88$; $F(1, 194) = 2.52$, $p = .11$,

$\eta^2 = .013$). However, in the high status-striving condition, participants found the pearl brooch in the environmental cost condition to be more appealing ($M_{EC} = 6.32$ vs. $M_{EE} = 5.07$; $F(1, 194) = 4.75$, $p = .03$, $\eta^2 = .024$).

In sum, we contend that certain consumers (those striving for status) are drawn to status products *because* they are destructive to environmental resources. Consuming these products enables consumers to access an object that represents an additional path to high social status: dominance. Thus, we find support for our prediction that objects that embody both signals (prestige and dominance) are a stronger representation of status and, as such, are particularly appealing to status-striving consumers.

Do Fighters Wear Prada?
Consumer Dominance Orientation and Desire for Luxury Brands

EXTENDED ABSTRACT

Consider the 2017 award-winning perfume ad *World*, by Kenzo, featuring Margaret Qualley firing missiles, roaring like a beast and beating security agents in an opera. This ad is an exemplar of a recent wave of luxury communications by brands such as Dolce and Gabbana, Dior or Cartier, emphasizing aggressive imageries. Such a dominant strategy contrasts with the historical role of luxury goods as symbols of high standing, refinement and prestige (Dubois and Ordabayeva 2015).

The current work investigates when and why aggressive imageries, reflecting a dominance orientation, may increase consumer desire for luxury brands. Dominance orientation refers to the use strength, aggression and intimidation to obtain/withhold status – in opposition to prestige orientations (Cheng et al., 2013; Maner, 2017).

With this work, we extend prior research, within the luxury space, showing that salespersons' aggressiveness, can underlie luxury brands' status and superiority in customers' eyes (Dion & Arnould, 2011; Dion & Borraz 2017; Ward & Dahl, 2014).

An exploratory coding of 200 perfume brand names shows that male fragrances have more aggressive names ($M = .14$) than female fragrances ($M = -.04$; $F(1, 198) = 3.65$, $p = .06$), suggesting that brands may intuitively target consumers high (vs. low) in dominance with aggressive imageries.

In contrast to this tendency, past work suggests that consumers low (vs. high) in dominance, may desire more aggressive imageries. For instance, it may help consumers increase their status in hierarchies where dominant behaviors are predominant (Maner, 2017). The greater the need to behave dominantly, the greater the reliance on luxury brands that use an aggressive imagery. Thus, consumers may be attracted by aggressive imageries to compensate for their own lack of dominance orientation. In support, threatened consumers often desire to purchase luxury goods to offset a threat or compensate for their powerlessness (Lee & Shrum, 2012; Rucker & Galinsky, 2008).

Building on this research, we propose that dominance orientation moderates the desire for luxury brands that use aggressive imageries such that aggressive imageries increase the attractiveness of luxury brands among consumers who need to behave dominantly, because these consumers perceive that luxury brands offer them an opportunity to be empowered (Wathieu et al., 2002).

Three studies test our predictions.

Study 1 provides evidence that an aggressive imagery increases the desire for the luxury brand for participants who need to behave dominantly (vs. do not) to acquire status. Specifically, this study (N=177) examines the role of status goals (neutral vs. prestige vs.

dominance) on the preference for an aggressive (vs. neutral) luxury ad. We manipulated status goals by asking participants to imagine themselves in a group, with a desire to gain status. Key to the manipulation, status was defined as "the ability to impose one's will on the others" in the dominance goals condition, but "admiration and respect from the others" in the prestige goals condition. There was a significant interaction of aggressive imagery × status goals on ad liking ($F(2, 171) = 2.99$, $p < .05$). In both the neutral and prestige conditions, participants did not exhibit greater desire for the ad using an aggressive (vs. non-aggressive) imagery ($F(1, 171) < 1.38$, $p > .24$). However, participants expressed greater liking when the ad featured an aggressive imagery ($M = 4.87$) than when it did not ($M = 3.91$; $F(1, 171) = 5.60$, $p = .02$) in the dominance goal condition.

To support the mediating role of empowerment potential and the moderating role of consumer dominance, in Study 2 (N=466), participants evaluated another luxury ad (aggressive vs. neutral). At the end of the survey, they completed a scale measuring their dominance orientation. Results showed that participants preferred the luxury brand after observing the aggressive (vs. neutral) ad ($\beta = .75$, $t(462) = 2.19$, $p = .03$). The aggressive imagery × dominance orientation interaction on brand liking ($\beta = -.13$, $t(462) = -1.67$, $p < .10$) revealed that the preference for aggressive imageries was driven by participants who had low (but not high) dominance orientation. Further, aggressive imageries increased the perceived empowerment potential of the brand ($\beta = 1.20$, $t(462) = 4.29$, $p < .001$), and this effect was moderated by participants' dominance orientation ($\beta = -.22$, $t(462) = -3.50$, $p < .001$). A moderated mediation analysis (Process, Model 8; Hayes & Preacher, 2013) revealed a significant index of moderated mediation (a = -.17, 95% CI = [-.2801, -.0582]).

Study 3 (N=354) provides further evidence for the mediating role of empowerment potential, by showing that the positive effect of aggressive imageries on brand/ad liking occurs when the model of the ad has a high empowerment potential (i.e.; female model), but not when he has a low empowerment potential (i.e.; male model). Participants consecutively evaluated two similar luxury ads (one with a female model and one with a male model) for the same brand (either both aggressive or both neutral). We found that participants preferred the ad ($F(1, 352) = 5.51$, $p = .02$) and the brand ($F(1, 352) = 4.09$, $p = .04$) when shown an aggressive (vs. neutral) ad with a female model. Neither of these effects was moderated by gender ($|t| < .32$, $p > .74$), showing that the effect does not exclusively work with female consumers. However, these effects do not appear with ads featuring a male model (Fs < 1.73, ps ≥ .19).

Planned studies include comparing the effect aggressive imageries in luxury versus non-luxury contexts. A first investigation (N=266) showed that aggressive ads (vs. neutral) increase the perception of empowerment potential for luxury brands ($F(1, 262) = 10.79$, $p = .001$), but not for non-luxury brands ($F(1, 262) = .038$, $p = .54$). This result needs to be confirmed in a study examining further consequences on brand liking.

Overall, the current work examines situational and chronic moderators of when consumers with high need for dominance express greater desire for aggressive (vs. neutral) ads and brands. This research contributes to the literatures on luxury consumption, aggression, compensatory mechanism and social dominance.

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Effects of Sensory Ambient Factors on
Purchase and Consumption of Food and Non-Food Products

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Paper #1: Effects of Synthetic and Analytic Graphical Front-of-Pack Labels on the Nutritional Quality of Supermarket Food Purchases: Evidence from a Large-Scale Randomized Control Trial

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Paper #2: Going My Way? The Effect of Perceived Lighting on Perceptions of Provision and Elimination

Kevin L. Sample, University of Georgia, USA
Julio Sevilla, University of Georgia, USA

Paper #3: Effects of Retail Ambient Color on Purchases of Indulgent Foods: Findings from Field and Lab Studies

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Annika Abell, University of Tennessee (Knoxville), USA

Paper #4: Hot or Cold? How Ambient Temperature Influences Calorie Consumption

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SESSION OVERVIEW

Ambient sensory factors play critical roles in unconsciously and subconsciously influencing consumer product judgments and choices (Krishna 2012). Prior research has examined the role of different sensory ambient factors such as scent (Biswas and Szocs 2019; Madzharov, Block and Morrin 2015), sound (Sayin et al. 2015), and décor (Bell et al. 1994), among other factors. In this proposed special session, we extend this research stream and examine how ambient visual and haptic factors non-consciously influence consumer product evaluations, choices, and consumption.

The first paper zeroes in on effects of visual cues associated with a package on food purchase behavior. The second paper zooms out and examines perceived directionality of lighting on a product and its effects on purchases of food and non-food products. The third paper zooms out further and examines the effects of ambient visual cues, in the form of ambient color, on food purchases. While the first three papers examine the role of ambient visual cues, the fourth paper zooms out to a more subliminal sensory stimulus in the form of ambient temperature (which is a haptic stimulus) and its effects on food consumption.

To elaborate, in the first paper, **Chandon and co-authors** conducted a large-scale field experiment in 60 French supermarkets for three months to examine how front-of-package (FOP) labels influence the nutritional quality of food purchases. They found that design choices mattered more than whether the label graded the overall nutritional quality of the food on a single dimension (synthetic label) or provided information on calories, fat, sugar, and salt (analytic

label). **Sample and Sevilla**, in the second paper, demonstrate how consumers' reliance on visual information is influenced by perceived lighting directionality. They find that products that provide benefits (eliminate issues) are preferred when lit from above (below) due to a match between lighting direction (coming from above or below) and metaphorical interpretations of provision and elimination properties. In the third paper, **Biswas, Szocs, and Abell** conducted a series of field and lab studies to demonstrate how red (vs. blue or white) ambient colors enhance consumer arousal levels, which in turn influence the indulgent level of the food purchased or preferred. In the fourth paper, **Sinha and Bagchi** investigate how ambient temperature (67-77 °F) in typical consumption settings, such as at a restaurant or at home, influences calorie consumption. Through a series of field and lab studies, they demonstrate that as ambient temperature increases, calorie consumption decreases due to social density perceptions.

Together, the four papers in this proposed special session aim to address important research questions related to how subtle sensory factors like visual and haptic stimuli can influence product choices and consumption. The four papers complement each other. While all of them focus on ambient sensory stimuli (visual or haptic related), they have different degrees of zoomed-in versus zoomed-out focus, as mentioned earlier. Also, this set of papers focuses primarily on food related outcomes with the second paper also examining non-food outcomes.

Effects Of Synthetic and Analytic Graphical Front-of-Pack Labels on the Nutritional Quality Of Supermarket Food Purchases: Evidence from a Large-Scale Randomized Control Trial

EXTENDED ABSTRACT

To promote healthy eating, the European Union recently introduced new regulation allowing information about nutritional product quality to be placed, on a voluntary basis, on the "front of pack" (FOP) of the food product. Prior research has shown that graphical nutrition labels are liked by consumers (Feunekes et al., 2008) but there is sparse research on their impact in real-life shopping conditions (Cecchini and Warin, 2016, but see Nikolova and Inman, 2015 for an exception). An important unresolved question is whether synthetic systems, which grade overall nutritional food quality on a single dimension, outperform analytic systems, which provide detailed information on calories, fat, sugar, and salt. As a result, health authorities and food companies disagree on which system is best to improve the nutritional quality of food purchases.

To answer these questions, the French Health Minister commissioned the authors to supervise a large randomized controlled trial comparing the effects of two synthetic labeling systems (SENS and Nutri-Score) and two analytic systems (Nutri-Repère and Nutri-Couleurs), chosen following a comprehensive consultation process.

FOP labels were put on packages of food products in 10 randomly-selected supermarkets per labelling system. In addition, twenty control supermarkets were randomly chosen. Consumers were informed of the local intervention in each treatment supermarket through leaflets and displays. Stickers were affixed to food products in four categories: fresh prepared foods, pastries, breads, and canned prepared meals. Participation by the manufacturers was on a voluntary basis, by design, as per EU regulations (only back panel nutri-

tion information is mandatory). The large majority of manufacturers and all three retailers agreed to participate. Once a firm agreed to participate, all of its products were labeled.

We evaluated the performance of the labeling systems in two ways. First, we computed a weighted average of the nutritional quality of the foods bought by each shopper. Nutritional quality was assessed using the nutrient profiling score developed by the British Food Standards Agency (FSA). The FSA score can range from -15 (best) to +40 (worst nutritional quality). We chose the FSA score as a measure of nutritional quality because its association with metabolic syndrome, cancer, and cardiovascular risks has been established in large cohort studies (Adriouch et al., 2016).

The second dependent variable examines the effects of the labeling systems on the purchase incidence of foods with low, medium, and high nutrition quality, by category. To do this, we first divided the products into terciles, based on the FSA score in each category, and estimated the average purchase incidence of the products in each FSA tercile. Unlike the basket analysis, which only looks at consumers who bought at least once in the category in 2015 and 2016, the purchase incidence analysis takes into account all consumers who visited the stores during the study periods.

We estimated the average treatment effects through a difference-in-differences analysis. This approach accounts for any differences between treatment and control groups from data outside the treatment period. Among synthetic labels, Nutri-Score again outperformed SENS, significantly at 5%. Among analytic labels, Nutri-Repère significantly outperformed Nutri-Couleur.

Looking at purchase incidence for high, medium, and low nutritional quality products, we find again that both synthetic systems have significant results in the desired direction. Both Nutri-Score and SENS improve the amount of purchase incidence of healthier products, with positive coefficients for the first tercile, and/or decrease the purchase incidence of unhealthier products, with negative coefficients for the third tercile. On the analytic labels side, Nutri-Couleurs also does well in that category.

Overall, the distinction between synthetic labels and analytic labels mattered less than the specific design choices of each labeling system. On that point, Nutri-Score outperformed the other systems, most likely because its ruler design and choice of colors and labels (A to E, green to red) provide an easier way to evaluate the relative nutritional quality of the food. However, the key conclusion is that these FOP systems, which had shown promising results in laboratory and online studies, had disappointingly small results in the field (all Cohen's d were below 0.02) and not even always in the expected direction. This underscores the importance, for policy recommendation, of conducting studies in the field, in collaboration with producers, retailers, and health authorities.

Going My Way? The Effect of Perceived Lighting on Perceptions of Provision and Elimination

EXTENDED ABSTRACT

Whereas prior research has examined the influence of the brightness of ambient light on consumer behavior (Biswas et al. 2017; Huang, Dong, and Labroo 2017; Xu and Labroo 2014), we study lighting from a different perspective – lighting directionality. Extant research has noted that consumers see ambiguous objects lit from above as closer (i.e., coming) and lit from below as further (i.e., going; Hess 1950; Gibson 1950; Ramachandran 1988). We extend this phenomenon to complex product shapes that have a discernable top and bottom, demonstrating that a product can be perceived as coming (lit from above) or going (lit from below).

Further, in alignment with past work noting how product properties can have metaphorical associations and perceptual influences (Deng and Kahn 2009; Nelson and Simmons 2009), we examine how perceived lighting directionality may interact with the prevalent product properties of provision (i.e., giving a benefit) and elimination (i.e., removing an undesirable condition). We argue that provisional properties evoke perceptions of arrival (i.e., coming). Conversely, we argue that elimination properties generate perceptions of departure (i.e., going). Together, perceived lighting and provisional/eliminating properties interact to shape consumer preference. Specifically, consumers prefer lighting from above (below) for provisional (eliminating) products, as this matches the metaphorical interpretation of a provider (eliminating agent) coming towards (moving away) from a consumer. Two pretests and four studies investigate this novel area.

The first pretest (N=89) establishes that a product lit from above (vs. below) is perceived as coming (vs. going), whereas the second pretest (N=131) establishes that consumers hold metaphorical interpretations of coming (vs. going) for provisional (vs. eliminating) properties.

In study 1, undergraduates (N=127) were asked: "Which one of these pictured mouthwashes seems better at 'providing fresher breath'('eliminating bad breath')? They were also presented with an image of a mouthwash with a logo lit from above or from below resulting in a 2 (providing vs. eliminating) X 2 (light from above or below) mixed design. Logistic regression reveals a significant effect (β=.511, $\chi2(1)$=7.517, p=.006), such that participants in the provision condition preferred light from above, whereas those in the elimination condition preferred lighting from below.

Study 2 (N=444) replicates this effect in a similar paradigm where the dependent variable was preference for the product. An ANOVA examining preference reveals a significant interaction ($F(1,440)$=10.649, p =.001), such that consumers prefer products lit from above (below) claiming to provide (eliminate). Simple effects were also significant.

Study 3 showed that the effect leads to downstream consequences. Participants (N=225) were randomly shown one pair of images with a claim of either provision or elimination on both advertisements. There was one experimental image, with lighting from above or below, and one control image with no apparent directional lighting, resulting in a 2 (claim: provision vs. provision) X 2 (perceived lighting: above vs. below) between-subjects design. Thus, every participant saw a control image with no directional lighting. Participants were asked which product they preferred, would be more likely to purchase, and would pay more for on three different pages. Logistic regression reveals a significant interaction for preference (β=.581, $\chi2(1)$=17.287, p<.001) and significant simple effects for both provision and elimination. Similar interactions and simple effects were found for purchase intentions (β=.510, $\chi^2(1)$=13.507, p<.001) and willingness to pay (β=.399, $\chi^2(1)$=8.452, p=.004).

Finally, the process of this phenomenon is addressed in study 4 by exposing the role of the perceptual system. For both provision and elimination, the same order of events should occur for consumers. For instance, a providing or eliminating agent must first come from afar toward a consumer to provide a benefit (take something away) and then this agent departs. Thus, even though consumers focus on different parts of the act dependent upon it being an act of provision or elimination, the same process needs to occur. Therefore, to demonstrate the role of these perceptual expectations, we sought to interfere with this process by exposing participants to a proximity manipulation (focus on something very close). In contrast, participants exposed to a proximity control (focusing on something far away) would exhibit the same preferences as in prior studies. Thus, we an-

ticipated that participants exposed to the proximity control would exhibit the same preferences as in prior studies, whereas those exposed to the manipulation would have their perceptual expectations disturbed such that preferences would be no greater than chance.

For the proximity part of the study, undergraduates (N=159) were told to spend some time imagining a car being very close (far away) for the control (manipulation), and this was followed by a few inconsequential questions. In a subsequent study, participants were shown two providing or eliminating advertisements for the face wash from study 3 lit from above (below). We assessed preference, likelihood to purchase, and willingness to pay in the same manner by which these were assessed in study 3. Logistic regression reveals a significant interaction based on the proximity manipulation and facewash claim (β=.444, $\chi2(1)$=6.981, p=.008). As expected, results mirrored those from study 3 for all three dependent variables when participants were exposed to the proximity control. For the proximity manipulation, however, choice was at chance for the provision condition and reversed for the elimination condition. Though, we did not expect this reversal for elimination, the proximity manipulation still had the anticipated effect of disturbing typical preferences thereby exposing the role of perceptual expectations.

The present work investigates the role of lighting directionality and metaphorical interpretations of provision and elimination properties in an increasingly visual (i.e. online and mobile) marketplace (Kane and Pear 2016). We show that products that appear to be lit from above (i.e., coming) better match consumers' expectations for products that provide benefits (i.e., coming), but products lit from below (i.e., going) better match consumers' expectations for products that eliminate issues (i.e., going). This subtle manipulation has critically important implications for both researchers and practitioners.

Effects of Retail Ambient Color on Purchases of Indulgent Foods: Findings from Field and Lab Studies

Dipayan Biswas, Courtney Szocs, and Annika Abell

EXTENDED ABSTRACT

Ambient sensory cues strongly influence consumer judgment and behavior. For instance, retail atmospheric elements like ambient scents (Biswas and Szocs 2019; Madzharov, Block, and Morrin 2015) and ambient light (Biswas et al. 2017), among other factors, influence purchase behaviors at retail stores and at restaurants. Among all ambient sensory stimuli, ambient color is perhaps the most ubiquitous element since it is an integral aspect of any retail environment, including at stores, restaurants, and cafeterias. In that regard, we examine the effects of ambient color on children's and adult's food purchases. Specifically, we examine how red versus non-red ambient colors in school cafeterias can influence children's purchases of healthy and unhealthy items. The specific focus on ambient color and its influence on food purchases is driven by both conceptual and practical considerations.

From a conceptual perspective, such a focus can enhance our understanding of cross-modal sensory influences of visual inputs associated with ambient color on food choices, which are associated with the gustatory system. This is especially important since some form of ambient color is omnipresent in almost any eating context. Moreover, prior research, which has examined cross-modal effects has mainly focused on how product related factors, rather than factors in the ambience, influence customers' perceptions and decisions (e.g., Hoegg and Alba 2007; Krishna, Elder, and Caldera 2010). Our focus on cross-modal effects related to ambient factors is important since managers in retail settings would potentially have more control over the ambience than over products sold in the store or restaurant.

If ambient color does indeed influence food purchases, then consumers can potentially be nudged towards more healthful purchases through changes to the dominant color in the ambience.

We develop our hypotheses based on work in the color literature (Bagchi and Cheema 2013; Hoegg and Alba 2007; Mehta and Zhu 2009) and extend it to the cross-modal influences of visual cues on gustatory factors. In two of our field experiments, we focused on red and blue colors, consistent with prior research (Bagchi and Cheema 2013; Mehta and Zhu 2009). Specifically, red and blue are almost at the opposite ends of the color wavelength spectrum and hence, offer contrasting comparisons. In addition, extensive prior research demonstrates interesting differential effects of red versus blue colors on behaviors (Bagchi and Cheema 2013; Mehta and Zhu 2009). Building on this research stream, we propose a set of hypotheses. We test our hypotheses with the help of three field experiments at school cafeterias and a series of lab experiments.

First, a large-scale field experiment at an elementary school (study 1) showed that when the cafeteria at the school had red (vs. blue) as the dominant ambient color, the children purchased unhealthy foods to a greater extent.

We followed this up with a natural field experiment at a high school where the cafeteria was repainted. Before repainting, the cafeteria did not have red color in the ambience; after the painting, the cafeteria had a predominantly red colored ambience. The results of this study again demonstrate that red ambient color leads to a greater degree of unhealthy food purchases.

Then, study 3, a field experiment at a middle school, provides evidence for the underlying process in a field setting. Specifically, the results of this study demonstrate the mediating effects of induced arousal for the effects of ambient color on food choices. This study also shows how hunger level moderates the effects of ambient color on food choices.

We followed up the field studies with a series of lab studies. Study 4 examined the underlying process through a test of moderation. The results of a 2 (ambient color: red vs. blue) X 2 (induced arousal) on food choices showed an interaction effect whereby the effects of red (vs. blue) ambient color on preference for indulgent food options got attenuated when arousal was induced (such as through watching a movie clip). Study 5 replicated the moderating effects of study 4, using a different type of arousal manipulation. Study 6 offered empirical support for our theorizing by providing an objective physiological measure of arousal. That is, GSR (Galvanic Skin Response) measures supported our theorizing that red (vs. blue) ambient color increases arousal level.

In conclusion, the findings of this research highlight the importance of ambient color on food choices. While prior research has identified effects of several different subtle factors on choices for healthy versus unhealthy options (Dhar and Wertenbroch 2012), the present research is the first to identify the effects of ambient color on choices involving healthy versus unhealthy options. The findings of this research also add to the growing literature on sensory marketing (Krishna 2012). While prior research has examined different aspects of color, no study has examined how the presence of colors in the ambience might influence food choices. Hence, our findings have implications for cross-modal sensory influences of visual cues (i.e., color) on gustatory (i.e., food choice) outcomes. The findings of this research also contribute to the literature on effects of atmospherics and environmental factors on food choices. On the practical side, school cafeterias, restaurants, and supermarkets might be able to nudge customers (children and possibly adults) towards more healthful choices by avoiding red color in the ambience.

Hot or Cold? How Ambient Temperature Influences Calorie Consumption

EXTENDED ABSTRACT

While past research suggests that exposure to extremely low temperatures (e.g., in Antarctic expeditions where temperatures are in the -77°F to 30°F range; Milan and Rodahl 1961) over a prolonged duration (e.g., one month in Milan and Rodahl 1961; three months in Kark et al. 1948), increases calorie consumption, their findings may not be applicable in typical consumption settings, such as at a restaurant or at home where consumption frequently occurs. We extend this research by demonstrating that, even within the range of temperatures typically encountered in ambient settings (67°F to 77°F), and with much shorter exposure times (10-15 minutes) that are commensurate with experiences at restaurants when ordering food, warmer temperatures lower calorie consumption relative to cooler temperatures.

Admittedly, these moderate temperatures (67°F to 77°F) and shorter time frames (10-15 minutes) are unlikely to elicit significant changes in human physiology or energy needs, which previous suggests is critical for the effects of extreme temperatures on consumption to obtain (Westerterp-Plantenga 1999); hence, these explanations cannot account for our findings. Instead, as we show, our effects emerge because of a social factor—impression management. A large literature suggests that consumers who are more concerned about managing impressions often consume lower calories. For example, consumers eat less when their consumption is observable by others, irrespective of whether these observers engage in concurrent consumption (Herman, Roth, and Polivy 2003) or are bystanders (Conger et al. 1980; Roth, Herman, Polivy, and Pliner 2001). These effects emerge because of impression management concerns (see Herman et al. 2003 for a review). We propose that warmer (vs. cooler) ambient temperatures increase impression management concerns, which lowers calorie consumption via social density perceptions.

Although the impact of temperature on perceptions of social density has not been conclusively shown, there is some evidence to suggest that temperature and social density perceptions may be correlated. Metaphorically, loneliness is often equated with a feeling of coldness, while crowding is associated with feeling warm. For example, in a poem, aptly titled "Cold and Lonely Nights," Connie Smith expresses her love to her beloved who she is away from. While linguistics and our lived experiences support these associations, past research also provides some empirical support. Ijzerman and Semin (2010) find that increasing physical proximity increases perceptions of ambient temperature. Likewise, Zhong and Leonardelli (2008) find that, when asked to recall lonely situations, participants reported the ambient temperature to be lower. Additionally, Ijzerman and Semin (2010) find that inducing physical proximity increases perceptions of ambient temperature. Relatedly, Zhong and Leonardelli (2008) find that, when asked to recall lonely situations, participants reported the ambient temperature to be lower. We argue that the opposite effect might also emerge—in warmer (vs. cooler) ambient conditions, social density may be judged to be higher (lower), which would then increase impression management concerns, thereby lowering (increasing) calorie consumption.

We investigate this phenomenon in four studies. We begin with a field study, where we observe consumption of customers during lunch at a restaurant on a warmer (77°F) and a colder day (68°F). We demonstrate that people consume less calories on the warmer day. In concert, we find that warmer temperatures also lower amount spent.

In study 2, using a consumption setting in the laboratory (Double Stuffed Oreo Cookies), we demonstrate that when ambient temperature is perceived to be higher, calorie consumption and total price decreased. Moreover, we demonstrate process via mediation—warmer perceived temperature leads to higher social density perceptions, which, in turn, increases impression management concerns, and lowers calorie consumption.

While ambient temperature was not manipulated in study 2, in our two subsequent studies, we manipulate ambient temperature in the laboratory. In study 3, we use a hypothetical restaurant lunch order scenario and demonstrate that when ambient temperature is higher, it increases perceptions of social density, which increases impression management concerns, thereby lowering calorie consumption.

In study 4 we used a moderation approach and actual consumption in the lab (M&Ms). In addition to manipulating ambient temperature, we also manipulate social density to be very high or low. We demonstrate that when social density is very high at the outset, impression management concerns are already likely to be high. In such a situation, warm temperatures are unlikely to induce further increases in impression management concerns, and therefore the effect of temperature is attenuated. However, consistent with our general thesis, higher density does indeed lower consumption relative to when density is lower. This effect, however, only emerges when consumption is visible.

Most societal exchanges occur in controlled environments. Given that temperature can be easily manipulated, our research thus provides an easily implementable prescriptive tool to control eating, and, therefore, has important managerial and public policy implications. Restaurant managers may find it more beneficial to lower temperatures, as it is likely to not only affect consumers' bottom lines (by virtue of their calorie consumption) but may also affect firms' bottom lines—this is because, as we show, temperature induced lower (vs. higher) calorie consumption also leads to lower (vs. higher) spending. The present research provides guidance for policy makers on how to protect and empower overweight and obese consumers, and to give them opportunities to make healthy choices. It appears that maintaining a warmer temperature at restaurants and homes may be one way to lower calorie consumption. Encouraging consumers to wear warmer clothing could be another (as this is likely to reduce the need to thermo-regulate).

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Ads, Advocates, and Allies in Navigating the Road from Marginalization to Legitimation

Chairs: Steven Shepherd, Oklahoma State University, USA
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Paper #1: The Ally Effect: The Role of Implicit and Explicit Cues in Advertising Towards Marginalized Groups

Abigail Nappier Cherup, University of Nebraska-Lincoln, USA

Meike Eilert, University of Kentucky, USA

Paper #2: Sincere, Not Sinful: The Unique Role of Brand Personality in Shaping Liberals' and Conservatives' Views of LGBT Ads

Steven Shepherd, Oklahoma State University, USA

Tanya L. Chartrand, Duke University, USA

Gavan J. Fitzsimons, Duke University, USA

Paper #3: When Consensus Is Lost: Mobilizing Capital to Establish Consumer Legitimacy

Sunaina R. Velagaleti, Ignite360, USA

Amber M. Epp, University of Wisconsin-Madison, USA

Paper #4: Effective Advertising to the LGBTQ Communities: An Exploratory Study

Erica Ciszek, The Univerity of Texas at Austin, USA

Kathrynn Pounders, The Univerity of Texas at Austin, USA

SESSION OVERVIEW

This session investigates how marginalized consumer groups gain legitimacy through marketing and consumption, with a special focus on the LGBTQ+ community. The papers approach this question using a variety of methodologies and a diverse range of samples, including LGBTQ+ communities, allies, and marketing professionals. Understanding the legitimation of marginalized groups is of increasing importance to society in general and marketing specifically (Argo and Main 2008; Coskuner-Balli and Thompson 2013; Scaraboto and Fischer 2013; Walters and Moore 2002). As concepts of gender and sexual identity become more fluid, traditional categorizations and conceptualizations of marginalized consumers begin to erode. This demands a more nuanced understanding of these groups and how they themselves navigate these changes. More favorable representations serve as a means of facilitating inclusion and representation. This session will explore the many ways that legitimation of the LGBTQ+ community can be facilitated through marketing and consumption.

The first paper investigates how LGBTQ allies (vs. non-allies) respond to ads with either explicit or implicit signals of LGBTQ+ support, and under what conditions allies respond less favorably. The authors find that allies respond more favorably to explicit signals, in turn increasing purchase intentions and positive word of mouth intentions. This research also addresses the important literature gap on attitudes toward bisexual representation. The second paper explores the role of brand personality in how liberals and conservatives respond to same-sex couples in advertising. Results show that conservatives respond negatively to same-sex couples in ads because they view the ad as low in brand sincerity. Negative evaluations are attenuated when the ad is for an exciting brand. Archival analysis shows the benefits of LGBTQ+ representation by sincere brands. The third paper explores how same-sex couples navigate issues of legitimacy in the context of same-sex weddings, which challenge traditional gender dichotomies. Depth interviews and ethnographic observation reveal that consumers cultivate new forms of cultural capital around redefining gender in this traditional space where their tastes and preferences are not recognized or legitimized. Further, consumers' own moral judgements complicate their ability to reimagine gender enactments. Finally, the fourth paper reports in-depth interviews with LGBTQ+ advertising and communication professionals (brand managers, directors, consultants, CEOs, etc.), offering insights into best practices for LGBTQ+ advertising. Results emphasize the importance of authentic messaging through more nuanced and complex representations of sexual and gender minorities, intentional visibility efforts in light of a history of erasure, and producing universal messaging that resonates regardless of gender or sexual identity.

These papers address the challenges consumers and marketers face when attempting to legitimize marginalized consumers. Themes of more expansive inclusion and representation emerge across papers. Collectively, the papers prompt multiple questions for discussion: 1) What is the role of the marketplace in helping consumers establish legitimacy during times of societal change? 2) What can marketers do to ensure they legitimate consumers' evolving conceptions of gender and sexuality? 3) How can marginalized consumers best advocate for change? These papers that examine legitimacy in the same context should set the stage for a productive and impactful discussion.

The Ally Effect: The Role of Implicit and Explicit Cues in Advertising Towards Marginalized Groups

EXTENDED ABSTRACT

Advertising research on marginalized groups often focuses on consumer reactions to in- and out-groups, putting forth the assertion that consumers will respond favorably to other members of their in-group, and less favorably to members of their out-group (Choi and Winterich 2013; White and Dahl 2007). Specifically, research on marginalized groups has shown that companies risk alienating the dominant group of "mainstream" consumers with explicit and sometimes implicit signals of marginalized group identity in ads (Oakenfull and Greenlee 2005; Oakenfull, McCarthy, and Greenlee 2008; Read, van Driel, and Potter 2018). However, the mainstream is not a homogenous group of consumers, and variation in how different mainstream (i.e., not marginalized) consumers respond to those implicit or explicit signals remains unexplored.

In general, companies are increasingly incorporating imagery and symbolism from marginalized groups in their advertisements, reflecting diversity in the marketplace involving not only sexual orientation, race, cultural, and immigration background. Thus, it is imperative to understand how marketing managers can incorporate diversity in their ads and increase the visibility and inclusion of the marginalized group without creating dissonance among mainstream consumers. One particular group in the mainstream that is likely to react positively to signals associated with a marginalized group is that of allies. Allies are those consumers that have high affect towards and are supportive of the group. They exist for many marginalized groups including straight and cisgender people who support the LGBTQ+ community, white supporters of the Black Lives Matter movement, and neurotypical individuals who fight for the rights of individuals on the autism spectrum. In the present research, we address the following questions: 1) Do allies – those consumers with high affect towards the marginalized group – respond more favorably

to ads with explicit or implicit signals? and 2) Under which conditions do allies respond less favorably to such ads?

In two experimental studies, we test whether allies, or straight consumers high in affect for the LGBTQ+ community, respond differently to LGBTQ+ advertising signals than non-allies, or those low in affect for the community. Specifically, we examine ally and non-ally consumer responses to different types of LGBTQ+ signals (studies 1 and 2) and type of company support signals (study 2), within a framework of LGBTQ+ affect, perceptions of authenticity, attitudes toward the ad, and consumer outcomes (brand WOM and purchase intentions).

Study 1 tested whether and when straight consumers respond favorably towards an implicit versus an explicit LGBTQ+ signal depending on their level of positive affect towards the LGBTQ+ community. 195 heterosexual (straight) participants (50 % women 98/195, median age = 20 years) at a large Midwestern public university participated in this study in exchange for partial course credit. The study followed a 2 (signal: implicit vs. explicit) x continuous (affect) between-subjects design. Respondents were asked to review an ad by a fictitious company which portrayed a model with the gender-neutral name and her age. A pretest showed that the model in the ad could be perceived as either part of the LGBTQ+ community or not. We manipulated type of signal as follows. In the implicit signal condition, we overlaid the logo of the brand with the flag associated with the bi+ (pronounced "bi plus") community. In contrast to the LGBTQ+ rainbow flag, this flag is less commonly known thus sending an implicit LGBTQ+ cue. In the explicit signal condition, we specifically stated that the model is bisexual. We measured LGBTQ+ affect, attitude towards the ad, purchase, and WOM intentions using existing scales. Results show that an explicit signal can be both beneficial and harmful for the brand depending on the type of consumer. Consumers who show affection towards the LBGTQ+ community, also referred to as allies, have more positive attitudes towards an ad with an explicit LGBTQ+ signal than when this signal is implicit. This change in attitudes translates into increases in purchase and WOM intentions. On the other hand, consumers who score low on LGBTQ+ affect perceive an explicit signal to be negative. We do not find any difference in perceptions based on LGBTQ+ affect when the signal is implicit.

Study 2 tested straight consumers respond favorably towards an implicit versus an explicit LGBTQ+ signal depending on how the company shows their support of the marginalized community. This study includes 307 heterosexual (straight) participants (50% women, median age = 21 year) at a large Midwestern public university who participated in this study in exchange for partial course credit. This study involves a 2 (signal explicit vs. control) x LGBTQ+ affect (continuous) x 3 (company LGBTQ+ support: Logo, Logo + Statement, Logo + CRM) between-subjects design. The LGBTQ+ support conditions included the Human Rights Campaign's "Best Places to Work" logo, the logo and a statement of the company's commitment to the LGBTQ+ community, and a CRM statement claiming 5% of sales would go to support the community. The same scales as study 1 were used as well as a perceived brand authenticity scale. Findings show that there are conditions under which consumers with high affect towards the marginalized group respond more favorably towards explicit signals (HRC logo condition) but also conditions under which consumers with low affect respond more favorably to explicit signals (CRM condition). The latter is an unexpected yet important finding, showing that marketers can even reach non-allies with explicit signals associated with a marginalized group.

Taken together, the present research finds that marketers can use explicit signals associated with a marginalized group without risking favorable attitudes in the mainstream. Instead, explicit signals can even bolster the attitudes of allies, especially when the support of the marginalized group is authentic. The findings from this research have important implications for the acceptance of such ads in the mainstream media, allowing marketers to target a marginalized market without losing the mainstream market, thus helping with the inclusion of these consumers in the marketplace.

Sincere, Not Sinful: The Unique Role of Brand Personality in Shaping Liberals' and Conservatives' Views of LGBT Ads

EXTENDED ABSTRACT

If a manager of a sincere brand hires an agency to create their next ad campaign, will the agency consider LGBTQ content to be consistent with the brand? Likewise, if they propose an ad with LGBTQ content, how will the brand manager respond? A 2015 Wells Fargo ad featured a lesbian couple who were learning sign language in anticipation of adopting a hearing-impaired girl. Some conservative consumers condemned the ad, while many others saw the ad as positive and heartwarming (Benen 2015). We argue that while Wells Fargo may be trying to communicate brand sincerity (i.e. wholesome, sentimental, family-oriented; Aaker, 1997), consumers across the political spectrum considerably differ in how they interpret brand sincerity and the intended branding message.

Conservatives are more likely to resist change, support the status quo, and embrace traditionalism, and thereby have more negative attitudes toward the LGBTQ community (Jost, Nosek, and Gosling 2008; van der Toorn et al. 2017). It also follows that they will have a more traditional view of what constitutes brand sincerity (i.e. wholesome, family-friendly, sentimental). Thus, brand sincerity may be uniquely relevant to understanding how consumers with different moral sensibilities (i.e., liberals and conservatives) evaluate brands that wade into numerous morally and politically charged domains. This unique aspect of brand sincerity could contribute to a more nuanced understanding of how consumers respond to LGBTQ representation in ads. For example, how LGBTQ representation is received in one ad may not be entirely indicative of how a viewer will react to the same representation by another brand.

Relatedly, the LGBTQ community has traditionally been excluded from traits and concepts captured by brand sincerity, such as family and wholesomeness (Kates 1999; Kille and Tse 2017). It follows that sincere brands may be particularly well positioned to positively depict the LGBTQ community and contribute to legitimizing this marginalized group. However, some marketers may be concerned about alienating some heterosexual, cisgender consumers (Oakenfull and Greenlee, 2005; Um, 2012). We find that a barrier to more sincere LGBTQ representations in ads may come from the perception among conservatives that LGBTQ representation makes a brand appear less sincere, that this representation is less suited to sincere brands (as opposed to exciting brands), and is evaluated more negatively.

A pilot study (N= 207, heterosexual) had participants view a Fanta ad with a same-sex couple. Participants then rated the extent to which it represented brand sincerity (down-to-earth, family-oriented, wholesome, etc.) and excitement (daring, trendy, cool, etc.). Political orientation was also measured. As predicted, conservatives rated the brand as lower on sincerity than did liberals, but if anything rated it as more exciting.

In an experimental design, Study 1 (N= 135, heterosexual) had participants view an ad that either had a same-sex (male) or opposite-sex couple. They rated i) their attitude toward the ad, ii) the extent to

which the ad reflects each of the five brand personality dimensions (sincerity, excitement, competence, sophistication, ruggedness), and iii) political orientation. The two-way interaction between ad (same-sex vs. opposite sex couple) and political orientation was only significant for ratings of sincerity and not the other four brand personality dimensions. Conservatives saw the same-sex ad as less sincere compared to liberals, and as less sincere than the opposite-sex ad. Parallel effects were found for ad attitudes. Finally, the moderated mediation effect was significant; when the ad featured a same-sex (opposite-sex) couple, more conservative participants saw the ad as less (more) sincere, which was associated with more negative (positive) attitudes.

Study 2 (N = 379, heterosexual) built off of Study 1 by also manipulating brand personality (sincere vs. exciting). The brand personality of a travel/tourism company was manipulated using imagery and the brand's tagline, similar to past research (Aaker et al. 2004). One of the images in the ad was either of a same-sex (female) or opposite-sex couple. Participants rated i) their attitudes toward the ad, and ii) the extent to which the couple in the ad fit the brand (actor-brand fit; e.g. "The couple in this advertisement are suited to the featured brand"; Pounders and Mabry-Flynn 2016). The three-way interaction between ad content (same-sex vs. opposite sex couple), brand personality (sincere vs. exciting), and political orientation was significant for predicting both actor-brand fit and ad attitudes. When the brand was sincere, conservatives saw the same-sex couple as a poorer fit for the brand, and rated the ad more negatively compared to liberals, and compared to the opposite-sex ad. However, when the brand was exciting, conservatives showed no preference for the opposite sex ad over the same-sex ad, nor did their attitudes differ from liberals.

We also surveyed fifty LGBTQ participants and asked what they would like to see more of in terms of LGBTQ representation. Thirty-two percent of responses made reference to content that is captured by brand sincerity (e.g. "family-oriented ads," "happy families," "wholesome, non-stereotypical" representations). We also analyzed 316 ads with LGBT content by having the advertised brand rated on sincerity vs. excitement by coders, and combined this with a publically available LGBTQ representation score (AdRespect.com). We found that ads for more sincere (vs. exciting) brands had more positive LGBTQ representation.

The current research leverages insights from work on brand personality and political ideology to gain a better understanding of how LGBTQ ads are interpreted by different consumers. Those advocating for more desirable and "real" LGBTQ representation may see sincere brands as particularly well positioned to do so, and help to legitimize the LGBTQ community by normalizing LGBTQ people are relationships. This inclusion may improve the brand's reputation among the LGBTQ community and its allies, but may may come at the cost of alienating conservative consumers. Conversely, while the inclusion of LGBT content is relatively "safe" for exciting brands from an alienation point of view, such representations may not be sufficiently meaningful, progressive, or counter-stereotypical to earn goodwill or stand out among LGBT consumers and allies.

When Consensus Is Lost: Mobilizing Capital to Establish Consumer Legitimacy

EXTENDED ABSTRACT

In the fight for consumer legitimacy, understanding the rules of the game is critical. In turn, most consumer research illuminates how consumers seek ways to better play by these rules to elevate their power and status in the marketplace (Scaraboto and Fischer

2013; Ustuner and Thompson 2012). These rules are grounded in the taken-for-granted cultural categories, and related status hierarchies, that structure our ways of being and acting in the world (Bourdieu 1998). Through socialization, individuals internalize dominant cultural categories in a structure Bourdieu terms the habitus, or the cultural unconscious (Bourdieu and Wacquant 1992). When the cultural categories we think with are called into question however (e.g., What is masculine or feminine? How should we understand sexuality? Or family?), society's basis for evaluating what significations, depictions and enactments are considered appropriate or legitimate is disrupted. For example, current debates revolve around reassessments of strict dichotomies of gender – with some moving away from traditional ideals of femininity and masculinity to more fluid conceptions of how people express their gender. This category disruption is evidenced for example by CoverGirl's move to hire its first CoverBoy spokesperson in 2016 (Valeriya 2016) as well as by Billy Porter's arrival on the Oscars red carpet in Christian Siriano's first tuxedo dress for men (Gonzales 2019). Further, the legalization of same-sex marriage points to a reconsideration of what sexual orientations are recognized as socially acceptable (Von Drehle 2013). Following these reconsiderations, there is a loss of consensus over what forms of capital are now valued within status games related to gender and sexuality.

We join an emerging body of consumer research that examines attempts to deviate from established rules (McAlexander et al. 2014; Sandikci and Ger 2010; Thompson and Ustuner 2015). In this prior work, consumers often have clear prescriptions or scripts for deviation. When cultural categories are called into question, however, consensus is lost and the script for deviating is unclear. Thus, prior work does not account for consumers' strategies for managing these types of disruptions. More specifically, as cultural categories are disrupted, how do consumers experience a loss of consensus over what is viewed as legitimate? Further, why do some consumers mobilize capital in attempts to reestablish consensus while others do not? Why do consumers enlist particular strategies over others?

To examine how consumers experience and respond to a loss of consensus in the marketplace, we utilized depth interviews with 30 same-sex couples and ethnographic observation at wedding expos to study the consumption experiences of same-sex couples. We elected to study the wedding industry because ideas of gender and sexuality are historically embedded within the gender dichotomy of the wedding script (centered on bride/groom), and same-sex marriage directly confronts this gender dichotomy (Otnes and Pleck 2003).

Our findings establish a lack of consensus around how to appropriately signify, enact, and depict masculinity and femininity in the wedding context. Consumers whose tastes and preferences depart from traditional executions of femininity and masculinity in the wedding context are tasked with cultivating new forms of embodied cultural capital – or acquiring new skills (e.g. how to propose, fit a tux, design an engagement ring) and orientations (e.g. how to display an engagement ring to others, how to wear a tux) around how to do gender differently in the wedding space (Thompson and Ustuner 2015). Consumers who possess these forms of capital often report experiencing misalignments, defined as a disparity between what they desire and experience in the marketplace. We find evidence of this disparity as consumers describe an absence of materials, roles, and representations that recognize and legitimize their desired tastes and preferences. A disrupted consensus can also result in disorientation for consumers, meaning a sense of confusion or an unmooring around what their desires necessarily are in the marketplace. These consumers are less sure about how to express their gender in the wedding context and are still trying to understand their place in its

script. They are in the process of acquiring the necessary forms of embodied cultural capital in order to discover these desired expressions. Further, reconsidering the gendered norms and expectations inculcated through one's primary socialization can generate complex feelings and judgements via the moral habitus through lingering illegitimacies (Kates 2002; Thompson and Ustuner 2015) – particularly when the rules or expectations on how to "appropriately" expand upon past prescriptions are unclear.

Some, but not all, consumers mobilize capital in efforts to manage this lack of consensus in the marketplace. More specifically, we identify how consumers' variations in moral capital and embodied cultural capital shape whether and how they engage in strategies aimed at addressing the misalignments or disorientation generated around their desired tastes and preferences. Here, moral capital – defined as (il)legitimacy around sexuality – acts as an entry card by determining *whether or not* consumers engage in mobilization strategies. Those who possess moral capital in their local field engage in these strategies, while those who lack this capital often resort to coping techniques detailed in prior literature (Adkins and Ozanne 2005; Crockett 2017; Henry and Caldwell 2006). Embodied cultural capital directs *which* strategies consumers use, as its shapes whether consumers have the knowledge or skills needed to imagine and execute their desired gender expressions in the wedding context. Those with requisite embodied cultural capital tend to confront service providers in attempts to educate them on how to better respond to their evolving gendered tastes and preferences. In contrast, consumers lacking the requisite embodied cultural capital tend to either collaborate with service providers or experiment with gender resignifications through more experiential trial and error in efforts to cultivate new forms capital. Throughout this process of discovering and executing their desires, the moral habitus – as a foundation for moral judgments – shapes how consumers evaluate and judge their activities and aspirations in the marketplace.

Effective Advertising to the LGBTQ Communities:
An Exploratory Study

EXTENDED ABSTRACT

The lack of gender diversity in the media, particularly advertising, has recently become a dominant thread in cultural and industry discourses (Kemp 2018). Additionally, although efforts in advertising have been made to incorporate content inclusive of lesbian, gay, bisexual, transgender and queer (LGBTQ) perspectives, and have been successful at times, oftentimes these representations fall short. Traditionally, many of these ads have been associated with specific (and often stereotypical) product types, such as fashion and alcohol (Tsai 2011) and tend to be predominantly featured during specific times, such as Pride Month. This is surprising, as the buying power of this market has grown over $80 billion from 2015 to an estimated $987 billion in 2017. Marketers have long justified outreach to gay and lesbian consumers because of their spending power and consumer loyalty (Oakenfull 2012). Shifting social and economic norms also suggest the importance of increasing inclusivity to this particular market. According to a 2017 Gallup Poll, 10 million Americans identify as LGBTQ, and 7.3% of millennials identify as sexual and/or gender minorities, and younger people, especially Generation Z, are less committed to traditional gender norms, embracing queer identities and seeking brands who reflect similar perspectives. While some recent ad campaigns have been successful in integrating diverse LGBTQ representations, advertising that encompasses a complex representation of sexuality and gender is lacking. Further, there

is scant academic research that has focused on investigating effective advertising strategies to the LGBTQ community.

Provided the lack of extant research in the area, an exploratory study was conducted. A total of thirty-three individuals participated in semi-structured interviews between August 2017 and May 2018. Specifically, participants included national brand managers, communication directors, consultants, public relations specialists, chief executive officers, chief operating officers, directors, presidents, and vice-presidents. Interviews lasted between 45 and 90 minutes, were digitally recorded, and were transcribed in full. Textual data was analyzed using an iterative part-to-whole method of the constant comparison (Spiggle 1994).

The most prominent theme that emerged was inclusive and authentic advertising. We define inclusive authentic advertising as content that encompasses the diversity of lived experiences of LGBTQ communities. Within the discussion of inclusive authentic advertising different facets of inclusivity emerged: nuanced representations, or the depiction of complex representations of sexual and gender minorities, intentional visibility effects or the importance of concentrating integrated brand efforts within the LGBTQ community on a consistent basis, and universal messaging, or communicating content that resonates with people regardless of gender or sexual identity.

Participants discussed at length how LGBTQ audiences desire more nuanced representations that encompass their lived realities and represent the diversity of their and gender identity – and how oftentimes this is lacking in contemporary advertising. For example, participants indicated that LGBTQ audiences want content that is representative of the communities they live in, the families and relationships they have, and the professions and careers they work in. The notion of avoiding overt traditional stereotypes (e.g., effeminate gay man, masculine lesbian) emerged, but even more prominent was the importance, and often failure to depict the LGBTQ community in a complex manner that is consistent with realistic representativeness. This emerged when discussing race, family, and the lack of bisexual and transgender imagery. For example, one participant stated:

Marketers wanting to include transgender representations in advertising need to feature actual transgender individuals. Additionally, the experiences and perspectives of transgender individuals are diverse and complex, and marketing to this audience needs to reflect this heterogeneity.

Participants also spoke about the historical invisibility of bisexual and transgender perspectives in marketing, as well as a lack of authentic representations of these populations in contemporary advertising, pointing to the importance of intentional visibility efforts to combat this historical erasure. To enhance perceptions of authenticity, participants suggested brands engage with transgender populations and their allies to understand the diversity of trans experiences This observation was noted by several participants. For example, on participant stated:

With the "B" and the "T," we've not done any marketing campaigns [targeting] those communities. We talk about it with [clients]…but we've not had a client that says, "Hey, we have a strong business opportunity with trans women or trans men."

Another participant explained the importance of being consistent in terms of being visible:

I want to emphasize that my job is make sure we're out in the community all year not just during Pride. We launched a campaign to support our 30th anniversary of commitment to LGBTQ community.

Additionally, to increase perceptions of inclusivity and authenticity, participants stressed the importance of communicating content that resonates with people regardless of gender or sexual identity –

employing universal messages. For example when discussing effective campaigns, one participant shared:

It has to mesh with what the brand is overall for everyone. It has to be part of that. So it's more important to that audience but you can't make it something different. And that's really important. It has to have the same -- it has to be communicated pretty much in the similar tone and manner

Another shared the following sentiment when discussing a national campaign that was met with unwavering success:

We really put the whole imagery of this total family. What was important was the LGBT family was put out not as a one-off but was part of what the American family is It wasn't separating LGBT. It was putting it out in total to the masses.

In sum, this work contributes to the literature on gender in advertising. There has been little research focus on LGTQ advertising and sexual and gender minorities, and much of this work has focused on heterosexual response to LGBTQ advertising. Additionally, there is little research in advertising literature that examines best practices to reaching LGBTQ communities. The present work addresses this gap both by identifying the importance of inclusivity and authenticity in advertising messages targeted to LGBTQ communities, and defining what inclusive and authentic advertising is to LGBTQ consumers – nuanced representations, intentional visibility effects, and universal messaging.

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Consuming Information Online:
Perspectives on the Context-dependent Effects of News and Reviews
Chair: Jared Watson, New York University, USA

Paper #1: The Effects of Engagement Metrics on Media Consumption: A Persuasion Knowledge Account
Sokiente (Tari) Dagogo-Jack, Boston College, USA
Jared Watson, New York University, USA

Paper #2: Ratings and/or Reviews: The Effects of Aggregate and Disaggregate Product Information in Product Evaluations
Jared Watson, New York University, USA
Anastasiya Pochepstova Ghosh, University of Arizona, USA

Paper #3: The Role of the Mode in Product Evaluations and Choice
Daniel Villanova, University of Arkansas, USA
Elise Chandon Ince, University of South Carolina, USA
Rajesh Bagchi, Virginia Tech, USA

Paper #4: Does Gender Matter? The Effect of Management Responses on the Distribution of Online Reviews
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SESSION OVERVIEW

A significant proportion of adults go online to consume various types of information daily. Four in ten Americans often get their news online (Pew Research Center 2016), while over half of consumers trust online product reviews as much as personal recommendations (BrightLocal 2018). Yet, not all information is equally diagnostic (Feldman and Lynch 1988; Herr, Kardes, and Kim 1991). Indeed, consumers process the available information in light of contextual cues that might help them determine the veracity and accuracy of the information, without having to consume all available information. For example, consumers might choose to read "recent" versus "oldest" product reviews as a way to acquire the necessary product knowledge without reading all of the existing reviews. Or they might choose to read "most read" versus "most shared" news depending on specific consumption goals. These labels act as heuristic cues that aid in the consumers' selection and processing of information, and ultimately, their behaviors.

In this session, we answer questions regarding various cues that consumers might use to shape their behavior. In Paper #1, Dagogo-Jack and Watson demonstrate the differential effect of popular news category labels (e.g., "most shared" and "most read") on choice and consumption of news articles, while exploring some of the contexts by which this preference might change. The authors demonstrate that most read articles are generally preferred but become less preferred when consumers hold affiliation goals. In Paper #2, Watson and Pocheptsova Ghosh investigate how consumers integrate average product ratings into preference decisions in light of the individual reviews and how category labels such as "most recent" or "top-rated" reviews impact this process. They demonstrate that consumers tend to place more weight on the individual reviews versus the aggregate ratings but salient review labels can attenuate this effect. While much literature in the substantive domain has focused on the average product ratings and review volumes, Paper #3 demonstrates the important role of an overlooked central tendency, ratings mode. Villanova, Chandon Ince, and Bagchi demonstrate how the modal rating plays a key role in consumer preference formation, and how it differentially

influences behavior from other attributes. The authors demonstrate that the modal rating is predictive of consumers' perceptions even when it is inconsistent with other central tendencies. Lastly, in Paper #4, Proserpio, Troncoso, and Valsesia investigate how contextual factors related to the architecture of a review platform affect consumers' decisions to write reviews. They study the effect of management responses and find male and female reviewers react differently to the presence of management responses. Consequently, when responses are allowed (versus not), the proportion of female reviewers increases for positive and decreases for negative reviews.

With diverse methodologies (e.g., field experiments, lab experiments, secondary data sources, etc.) and multiple theoretical lenses, this session should hold widespread appeal for academics interested in consumption on the internet, and in the information era, more broadly. Taken together, these four papers collectively aim to advance the understanding of consumer behavior online, which holds significant implications for theory, consumers, and managers going forward.

The Effects of Engagement Metrics on Media Consumption: A Persuasion Knowledge Account

EXTENDED ABSTRACT

To capture consumers' attention and, consequently, advertisers' dollars, media outlets often conspicuously list the content people are engaging with the most. Presumably, highlighting the most popular articles can help overcome choice overload (Chernev et al. 2015; Iyengar & Lepper 2000), thereby keeping visitors engaged for longer. Typically, these lists are based on one of two engagement metrics: what others are reading or sharing. Although both metrics provide social proof (Cialdini 2009), we posit that they can have markedly different effects on media consumption. Indeed, this is consistent with prior research showing similar sources of social proof can differ in persuasiveness (John et al. 2017; Tu & Fishbach 2015).

Drawing on persuasion knowledge (PK) theory (Friestad & Wright 1994; Campbell & Kirmani 2000), we propose that sharing can constitute a persuasion attempt and thus consumers will be more skeptical of content that many others have shared (vs. read). Accordingly, as active persuasion knowledge should cause suspicion of MS articles, "most read" (MR) designations should be more effective drivers of media consumption than "most shared" (MS). However, since sharing, but not reading, is an inherently social phenomenon, consumers should pursue MS articles when affiliation motives are active. That is, opening oneself to persuasion by consuming content that others are sharing can help satisfy affiliation motives (Cialdini & Goldstein 2004; Tam 2015). Thus, active affiliation motives should eliminate the preference for MR (vs. MS).

Study 1 examined whether people generally prefer MR to MS across both highbrow and lowbrow outlets. In Study 1a, 201 participants were given a real choice of reading the MR or MS article from *The Atlantic*. Importantly, here and in all subsequent studies, no other information (e.g., title, author, topic) was provided about the articles. After choosing, all participants read the same article but were led to believe it was their chosen article. 63.68% of participants chose MR, which was significantly higher than chance ($\chi^2(1, N = 201) = 15.05, p < .001$). In Study 1b, 202 participants followed the same basic procedures, but the article came from *Buzzfeed*. Although

Buzzfeed emphasizes sharing, 63.86% of participants still chose MR over MS, which was significantly higher than chance ($\chi^2(1, N = 202) = 15.53, p < .001$).

Study 2 directly manipulated PK to examine its underlying role in the preference for MR over MS. 303 participants were randomly assigned to read an article that primed PK or a control article (Campbell & Kirmani 2000). Later, they chose between reading the MR or MS article from *The Atlantic*, and then all read the same article. Collapsing across experimental conditions, 61.06% of participants chose MR over MS, which was higher than chance ($\chi^2(1, N = 303) = 14.82, p < .001$). Furthermore, participants in the PK (vs. control) condition chose MR more (66.89% vs. 55.26%; $\chi^2(1, N = 303) = 4.31, p = .038$).

Study 3 tested the prediction that activating affiliation goals would increase the preference for MS. 500 participants were randomly assigned to a control condition or one of four goal conditions. In the goal conditions, participants imagined having a goal of fitting in with others, gaining credible information, gaining up-to-date information, or being entertained. In the control condition, there was no prime. Participants then chose between *The Guardian*'s MR and MS article. Before reading the article, participants rated their expectations of the MR and MS articles on various dimensions including how much the articles will help them fit in. Collapsing across conditions, 56% of participants chose MR over MS, which was higher than chance ($\chi^2(1, N = 500) = 7.20, p = .007$). Critically, there was a significant effect of goal on choice ($\chi^2(4, N = 500) = 14.15, p = .007$). As predicted, an affiliation goal (vs. control) increased MS choice (54.08% vs 35.79%; $z = 2.55, p = .011$). Moreover, expectations that the MS article will help you fit in mediated the effect of affiliation goals on MS choice ($b = .09$, 95% CI: [.002, .221]).

Study 4 further examined affiliation motives' moderating role. We manipulated whether participants chose a *New York Magazine* article for themselves or for others. Among the many ways that self-other decisions differ (Laran 2010; Polman 2012), choosing for others (vs. oneself) heightens affiliation concerns, as one must consider others' tastes and preferences to successfully choose for them. Thus, we predict that people should choose MR over MS for themselves, but MS over MR for others. Supporting this prediction, we found that when choosing for oneself, the majority of people (56.40%) preferred MR to MS ($\chi^2(1, N = 250) = 4.10, p = .043$); however, when choosing for others, the majority (56.80%) preferred MS to MR ($\chi^2(1, N = 250) = 4.62, p = .032$).

Finally, Study 5 manipulated affiliation motives (social exclusion vs. control; Mead et al. 2011) and also manipulated whether an article was framed as MR or MS. Participants read the article and rated its quality. Additionally, participants reported how often they share articles—a potential boundary condition. A regression revealed a significant affiliation motive × article framing × share frequency interaction ($b = .10, p = .034$). Specifically, the article framing × share frequency interaction was significant in the exclusion condition ($b = .25, p < .001$), but not in the control condition ($b = .05, p = .339$). Moreover, when affiliation motives were active, framing an article as MS (vs. MR) increased quality ratings among individuals who frequently share content (i.e., above 5.46/7; $b_{JN} = .43, p = .05$), but decreased quality ratings for those who infrequently share content (i.e., below 2.78/7; $b_{JN} = -.24, p = .05$).

Five studies showed that, due to persuasion knowledge, consumers generally prefer MR content to MS content. Furthermore, this preference is eliminated when affiliation motives are active, as consuming what others are sharing fosters connection. By revealing how different engagement metrics shape media consumption decisions, this research not only advances the social influence and social

transmission literatures but also offers practical guidance for publishers and media companies.

Ratings and/or Reviews: The Effects of Aggregate and Disaggregate Product Information in Product Evaluations

EXTENDED ABSTRACT

Prior literature has extensively investigated the influence of average product ratings on consumer choice (Chevalier and Mayzlin 2006; Liu 2006; Duan, Gu, and Whinston 2008; Chintagunta, Gopinath, and Venkataraman 2010). Recent literature has begun to investigate how individual reviews impact consumer choice (Ludwig et al. 2013; Villaroel et al. 2017). To the best of our knowledge, little work has brought these streams of research together to investigate how consumers integrate both average product ratings and individual reviews into a purchase decision. In this paper, we examine consumer choice in light of both average product ratings and individual reviews.

Prior literature on has suggested that when consumers must make trade-offs (choosing an option that is superior on one attribute but inferior in another), choice difficulty increases leading to greater deferral (Dhar 1996; Dhar and Nowlis 1999; Tversky and Shafir 1992) and potentially suboptimal choices (Watson, Pocheptsova Ghosh, and Trusov 2018). While consumers often rely on simple heuristics like using the first discriminating attribute between options to make their decision (Gigerenzer and Goldstein 1999), this is not always the case. In fact, additional non-discriminating information might attenuate the influence of the discriminating variable. In this work, we vary the degree of discrimination between average product ratings and individual reviews to demonstrate a saliency effect such that individual reviews are factored into decisions even when they lack diagnosticity relative to the average product ratings, creating a potential problem for consumers and managers alike.

In Study 1, the authors constructed a choice set with a dominant option (i.e., higher average product rating and review volume) and inferior option (i.e., lower average product rating and review volume). Preference was measured between the dominant option ("1") and inferior option ("7"). For half of the participants, we manipulated whether they also saw individual product reviews, while for the other half of participants we gave them the choice to see individual product reviews and measured whether they did or not. Participants who saw reviews saw five reviews for each option (out of 46 and 11, receptively), and the displayed reviews had the same ratings and similar content, conceptually limiting the reviews' diagnosticity. An interaction between text exposure and whether it was measured vs. manipulated emerged ($p = .007$) such that when text exposure was manipulated, there was no significant effect of the presence of text ($M_{absent} = 2.26$, $M_{present} = 2.12$), but when participants selectively chose to expose themselves to individual reviews, there was a significant difference in preference ($M_{absent} = 1.82$, $M_{present} = 2.82$), suggesting that participants who choose to read reviews are less likely to discriminate on the average product rating and more likely to incorporate the individual reviews into their decision, leading to weaker preference for the dominant option.

In Study 2, the authors used a non-dominant choice set (higher-rated, lower review volume vs. lower-rated, higher review volume options) and manipulated the level of the review volumes in the choice set as in Watson et al. 2018. There, the authors demonstrated a decreased influence of average product ratings in the presence of low (vs. high) review volumes. Here, we also gave participants the option to view individual reviews, as in Study 1. A marginal interac-

tion emerged ($p = .061$) such that when participants did not view reviews, there was a significantly greater preference for the higher-rated option in the presence of high vs. low review volumes (M_{high} = 3.07, M_{low} = 4.09), replicating Watson et al. 2018. However, when participants chose to look at reviews for both options (which, once again, contained little discriminating information), the influence of average product ratings was attenuated (M_{high} = 3.87, M_{low} = 4.20). This again suggests that the mere presence of individual reviews decreases the diagnosticity of average product ratings, even when the information contained in the reviews lack discriminability.

In Study 2, participants once again faced a similar paradigm as Study 2, but this time, the valence of the reviews for each option were counter-balanced such that one option displayed negative reviews while the other displayed positive reviews. While this increases the diagnosticity of the individual reviews displayed, we argue that it also causes consumers to neglect the reviews that are not displayed (which are accounted for in the average product ratings). We also clearly labeled the reviews as "lowest rated" or "highest rated". In doing so, we provided a justification for the reviews that participants were going to see, presumably to help debias the effect of the individual review valences in relation to the aggregate rating. Consistent with this notion, a significant interaction emerged ($p = .001$) such that in the absence of the labels, participants indicated significant preference for the option with the positive reviews ($M_{\text{higher-rated positive}}$ = 2.24, $M_{\text{lower-rated positive}}$ = 5.98). When reviews were labeled, the same pattern emerged but was attenuated ($M_{\text{higher-rated positive}}$ = 3.06, $M_{\text{lower-rated positive}}$ = 5.48). This finding suggests that salient review sort labels can attenuate the influence of individual reviews, but consumers still place more weight on the disaggregate versus aggregate information in their decisions.

Taken together, in a series of studies, the authors demonstrate that consumers consistently overweight individual reviews relative to the aggregate (trusting "the few" over "the many"), which can be problematic. This research holds important theoretical implications for understanding how electronic word-of-mouth can help, but also bias, consumer decisions. Furthermore, these findings have critical implications for consumers who would like to make better decisions, and managers who would like to improve the customer decision process on their platforms.

The Role of the Mode in Product Evaluations and Choice

EXTENDED ABSTRACT

Product ratings play an important role in influencing consumer purchase decisions. Consequently, online retailers and consumer reviews' websites provide ratings information. Given its importance, researchers have also studied how various facets of ratings information affect consumer decision-making (Babić Rosario et al. 2016). While a major focus of past research has been on how specific distributional characteristics, such as mean ratings, volume, and dispersion affect decision-making, we argue that another, overlooked property, the mode (most frequent rating), also plays an important role and examine why. Our investigation has important implications for understanding *how* consumers extract information from distributions and for managers.

Our thesis is that when evaluating distributions, consumers develop a summary representation. This summary representation need not be exactly the same as any particular central tendency (Kim, Kwon, and Chiu 2017), but is influenced by them- accordingly, we identify the mode as an overlooked input for product evaluations. We believe this occurs because people use the mode (or frequencies) to judge the prototypical response. Categorization research suggests

that typicality judgments are influenced by the frequency of occurrence—the more frequently an event occurs, the more likely it is considered as typical or representative (e.g., Solso and McCarthy 1981). Consequently, we believe that people will use the mode as an input into summary representations of distributions, which will in turn influence evaluations.

We investigate these effects in ten studies. In study 1 we present field evidence based on Amazon's sales data. In the remaining nine, we demonstrate the robustness of this effect and demarcate circumstances under which the influence of the mode weakens.

Study 1

We utilized data from Amazon.com to assess the effect of the mode on product sales (McAuley, Pandey, and Leskovec 2015; McAuley et al. 2015). Using 34,312 observed product ratings distributions, we regressed the sales rank of each product on ratings dispersion, the mean rating, the number of ratings, and the mode rating. As expected, beyond the effects of the other variables, the modal rating was positively related with sales. While the field data of study 1 provide external validity, we caution that these are just correlational results. We conducted several laboratory experiments to provide clearer causal inferences.

Study 2

Here, we assess the process by which the mode affects evaluations and experimentally control other distributional characteristics. Participants (N=100) were assigned to a 2-mode (high, low) between-subjects design in which each distribution had a mean/median of 5 and the same variance. In the high(low) mode condition, the mode was 7(3), on a 0-10 scale. We also noted the average rating. Participants evaluated the product and reported open-ended responses to items asking what rating they believed was (representative/informative/diagnostic) of, described, illustrated, and summarized the product's underlying quality, which served as our measure of the representative rating (α=.95). The high (vs. low) mode condition was evaluated significantly more positively because individuals believed a higher rating to be more representative of the distribution (the indirect effect was significant).

Studies 3A-C

In these studies, we tested robustness of the mode effect to salience of other central tendencies. In 3A (N=163), participants were either shown high or low mode distributions alone, or accompanied by summary statistics- the mean, median, and mode. We found the effect even when all statistics were provided. In 3B (N=213), we even added an arrow to call out the mean/median visually on the distributions, and the effect persisted. In 3C (N=67), we nixed distributions altogether and just presented statistics textually, and again found the effect. Even when other central tendencies are made salient, consumers utilize the mode.

Studies 4A-D

In these studies, we attenuated the effect by making the mode less diagnostic of the representative rating, providing more evidence for our summary representation account. Pretests revealed individuals feel the modal rating is the main target of suspicion when the website provides a warning that some of the reviews may be fake (as Yelp.com does). In 4A, participants (N=202) were assigned to a 2-mode x 2-suspicion (control, high) between-subjects design. In the high-suspicion condition, participants also saw a consumer alert noting some reviews may be unreliable. The interaction was significant, with a significant (non-significant) mode effect in the control (high-

suspicion) condition. In 4B (N=202), we replicated this interaction using individual differences in suspicion about product ratings.

Pretests also indicated the mode was seen as less typical of the distribution if it had a lower relative frequency or if it was on the edge (vs. interior) of the distribution. Participants were assigned using between-subjects designs: in 4C (N=242) to a 2-mode x 3-distribution (very-dominant, less-dominant-1, less-dominant-2), and 4D (N=164) to a 2-mode x 2-location (interior, edge). The interactions were significant, with attenuated mode effects in the less-dominant and edge conditions. Together, these studies show the mode has a weaker effect on the representative rating, and in turn evaluations, when the mode is perceived as less diagnostic.

Study 5

To examine the mode's effect on choice, participants (N=211) compared two brands with two product ratings distributions. We employed a 2-information (averages-only, averages+mode) x 2-price-trade-off (none, present) between-subjects design. Participants in the averages-only (averages+mode) condition saw only the average ratings (saw both averages and distributions). We structured the choice to involve trading off between a higher mean (but lower mode) and a higher mode (but lower mean) option. In the conditions with a price-trade-off, not only did the product with the higher mode (8 vs. 6) have a lower mean (6.5 vs. 7.5), it was also priced higher ($25 vs. $20). This presented participants additionally with a trade-off with price. Choice of the lower-mean (but higher-mode) option increased when distributions were shown, regardless of whether there was a price-trade-off or not (averages-only: 2% vs. averages+mode: 49%).

Across ten studies, we demonstrate that the mode of a ratings distribution has a substantial impact on consumers' product evaluations. We also document that the mode effect occurs because consumers use the mode to inform their summary representations of the distribution.

Does Gender Matter? The Effect of Management Responses on the Distribution of Online Reviews

EXTENDED ABSTRACT

User-generated content has gained tremendous popularity in the past two decades. Every day, users read TripAdvisor reviews to choose which hotel to stay in, Amazon reviews to decide which product to buy, or Yelp reviews to pick a restaurant to eat at. A growing literature has provided evidence that online reviews can increase sales, revenues, and product or service demand. This motivates firms to invest money and effort to monitor and manage their online reputation. A popular way of doing so is the practice of publicly responding to individual online reviews.

The current literature on online reputation management suggests that the adoption of management responses by a review platform has the potential to affect both the volume and the valence of consumer reviews (Proserpio and Zervas, 2017, Chevalier, Dover and Mayzlin, 2018, Wang and Chawdry 2018). One question that remains unanswered, however, is whether and how management responses influence the distribution of *who* decides to write a review. In other words, do manager responses affect different consumers in different ways?

We show that the presence of management responses differentially affects users' likelihood to write a review depending on their gender. Specifically, we study the effect of management responses on consumers' likelihood to rate hotels online and find that responses affect the proportion of female (compared to male) reviewers who choose to write a review, as a function of the valence of the review.

This proportion increases for positive and decreases for negative reviews. We dig deeper to explain this shift in reviewers' distribution and identify two separate explanations. On the one hand, we find that, when a hotel stay is positive, female users are more enthusiastic about writing a review to praise the hotel for the good service provided compared to male reviewers. Instead, when a hotel stay is negative, they exhibit a higher concern about the management's negative reaction to their negative feedback. Moreover, we provide evidence that responses to female reviewers are, on average, more critical than those to male reviewers, particularly when the review is negative.

In study 1, we analyze a dataset of reviews from two popular online review platforms, TripAdvisor and Expedia. The dataset includes a total of 1,382,489 reviews written for 1,853 hotels. We also obtained information about the gender of each reviewer. Importantly, all the hotels in our dataset responded to their reviews on TripAdvisor but not on Expedia, which allowed us to use a difference-in-difference analytical approach and compare the probability of observing a review written by female and male reviewers for a hotel on TripAdvisor with the probability of observing a review written for the same hotel on Expedia, before and after the hotel started responding to reviews. We find that, after a hotel starts responding to reviews, and relative to male users, female users' likelihood to write a review decreases by about 3.3% for negative reviews and increases by 4.6% neutral and positive reviews.

Study 2 (N=820) is a laboratory study aimed at validating and explaining the findings from our observational data. We selected a 2 (management responses: yes vs. no) x 2 (hotel stay: positive vs. negative) x 2 (gender: female vs. male) between-subjects design. Respondents were asked to imagine they were members of an online hotel rating platform (MyTrip.com). We manipulated management responses by stating that responses to reviews were either encouraged or not allowed on the site. Respondents were randomly assigned to read about one of two hotel stay they had, pre-tested to be either positive or negative, and were asked to report their likelihood of reviewing the hotel on MyTrip.com. We predicted likelihood to review with our 3 independent variables and found a significant 3-way interaction ($F(1,812)=3.01$, $p=0.02$). Next, we analyzed male and female reactions to management responses separately. We found male reviewers are more likely to review a hotel when management reviews are allowed ($M_{Response}=5.05$ vs. $M_{NoResponse}=5.38$, $F(1,812)=3.66$, $p<0.06$), irrespective of whether they had a positive or negative stay ($F_{Stay}(1,812)=0.95$, $p=0.33$ and $F_{Interaction}(1,812)=0.02$, $p=0.88$). The same analysis on female reviewers instead reveals a significant interaction ($F(1,812)=11.19$, $p < 0.01$). When the hotel stay is positive, likelihood to review is higher if management responses are allowed ($M_{Response}=6.06$ vs. $M_{NoResponse}=5.20$, $F(1,182)=12.68$, $p<0.01$). When the stay is negative, on the other hand, likelihood to review does not differ ($M_{Response}=5.12$ vs. $M_{NoResponse}=5.41$, $F(1,182)=1.42$, $p=0.23$).

Study 3 (N=343) was aimed at understanding how reviewers' motivations differ across genders. Respondents were asked to imagine they were members of an online review platform (MyTrip.com), and that they had received an email update regarding the company policy about management responses. They learned that, while the website previously did not allow management responses, responses from hotel managers would soon be encouraged. Next, respondents were asked to rate how they felt about this policy change. We find female reviewers are more excited about the possibility of directly *praising* managers for their good work ($M_{Female}=5.35$ vs. $M_{Male}=4.88$, $F(1,341)=14.14$, $p<.01$) and somewhat more concerned about potential *confrontations* that could arise with managers if they wrote a negative review ($M_{Female}=3.93$ vs. $M_{Male}=3.60$, $F(1,341)=3.35$, $p<.07$).

Finally, study 4 explores the possibility of gender bias in the way hotel managers respond to reviews with the Linguistic Inquiry and Word Count (LIWC) text analysis program. We processed all 962,395 responses in our TripAdvisor sample. The purpose of this analysis was to investigate whether management responses were more critical for female than for male reviews. Results suggest that, in particular when a negative review is written by a woman, management responses tend to be less positive and more negative, to use more third-person pronouns, to be angrier, and to use more power words and more negations (all $ps<.01$). These results are consistent with hotel managers being more critical towards reviewers that are female when it comes to addressing negative reviews.

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Time, Discounting, and the Consumer Experience

Chairs: Evan Weingarten, University of California, San Diego, USA
Annabelle Roberts, University of Chicago, USA

Paper #1: Duration Sensitivity of Key Moments

Kristin Diehl, University of Southern California, USA
Evan Weingarten, University of California, San Diego, USA
Gal Zauberman, Yale University, , USA

Paper #2: The Sign Effect in Past and Future Discounting

Sarah Molouki, University of Chicago, USA
David J. Hardisty, University of British Columbia, Canada
Eugene M. Caruso, University of California, Los Angeles, USA

Paper #3: Love is Patient: People are More Willing to Wait for Things They Like

Annabelle Roberts, University of Chicago, USA
Franklin Shaddy, University of California, Los Angeles, USA
Ayelet Fishbach, University of Chicago, USA

Paper #4: Discounting a Lump-sum vs. a Payment Stream: More Payments Leads to More Patience

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SESSION OVERVIEW

Time impacts consumers' perceptions and experiences through such factors as temporal location (i.e., whether something is in the past or future; Van Boven and Ashworth 2007), distance (Trope and Liberman 2010), and duration (Ariely and Loewenstein 2000). Additionally, consumers must often make temporal tradeoffs that test their patience for purchases, finances, or experiences (Dai and Fishbach 2013; Thaler 1981), which in turn rely on how consumers perceive time (Zauberman et al. 2009).

However, though there is much work examining how time both influences peoples' experiences and evaluations, and how those evaluations of time relate to discounting, there are still many open questions regarding consumption experiences and time. This session assembles multiple perspectives from established researchers on time to explore theoretical and practical questions regarding the impact of time on consumers' experiences, evaluations, and perceptions of events occurring over time. For example, how specifically does the duration of an experience change how people evaluate that experience? Do consumers discount gains more than losses in both the past and in the future? How does an evaluation of a product affect patience for acquiring that product? How does a consumer's perception of a structure of a payment (i.e., lump-sum versus payment stream) influence the discount rate?

This session examines these questions among several others. First, **Diehl**, **Weingarten**, and **Zauberman** develop a new conceptualization by which, contrary to duration neglect, duration has an impact on overall evaluations of experiences indirectly through its effect on experienced peak and end. Second, **Molouki**, **Hardisty**, and **Caruso** test in six studies how the sign effect, by which people discount gains more than losses, applies to future but not past outcomes. This asymmetry results from greater emotional intensity differences between gains and losses for the future but less so for the past. Third, **Roberts**, **Shaddy**, and **Fishbach** find in seven studies how, despite the possibility that liking could lead people to be impatient, liking instead increases patience. That is, people are more willing to wait for products they like more compared to products they like less. Fourth,

Malkoc, **Goodman** and **Rosenboim** examine how people perceive and discount lump sums versus payment streams (e.g., monthly paychecks). Specifically, they find people are more patient with payment streams than with lump sums because they concentrate on the first payment of the payment stream.

Altogether, these four papers speak to the conference theme of expanding wisdom by illustrating how time, which is often a scarce resource, is interwoven in multiple contexts within consumer behavior and by investigating what heuristics people use when making temporal judgments.

These four papers are all in later stages of development, having all completed at least three or more studies. This session should appeal to a variety of researchers and practitioners studying time and temporal discounting, financial decision-making, emotion, judgment and decision-making, self-control, perception, and consumer experiences. Three out of the four presenters are faculty with presentation experience, thus we expect the session to be well attended.

Duration Sensitivity of Key Moments

EXTENDED ABSTRACT

One classic finding is duration neglect. That is, when individuals provide evaluations of the pleasure or discomfort they experienced, the peak and end of the experience strongly correlate with overall retrospective evaluations, while the marginal impact of duration on evaluations becomes small when controlling for peak and end (Fredrickson and Kahneman 1993). This finding triggered multiple papers that examined moderators of duration neglect (Ariely and Loewenstein 2000; Morewedge et al. 2009).

Duration, however, may actually have a systematic indirect, multiplicative, effect on evaluation by influencing how people actually experience the peak and end moments. While the impact of duration after controlling for peak and end may be small, prior literature does in fact contain some evidence of a relationship between duration and peak/end (Fredrickson and Kahneman 1993; Redelmeier and Kahneman 1996).

We propose and demonstrate that duration affects the experienced key moments (peak, end), and hence duration has a multiplicative indirect effect on evaluation through these moments. This idea is consistent with recent developments in mediation suggesting that theoretically important indirect effects may exist even in the absence of direct effects (Zhao, Lynch, and Chen 2010). It is also conceptually related to a stream of research suggesting that events that occur during a time frame may influence duration (e.g., Ahn, Liu, and Soman 2009; Zauberman et al. 2010) but instead tests the opposite causal flow: duration may affect peak and end events that occur during it.

To test this idea, we conceptually replicate Fredrickson and Kahenman's (1993) experimental setup using aversive sound clips. In a first set of two studies, we manipulated the duration of sound clips. Participants listened to three 20-second and three 60-second patternless aversive sounds (blocks counterbalanced). Participants provided moment-to-moment ratings of their discomfort while listening to the sounds, and then rated overall evaluations of discomfort after each sound. The most extreme moment-to-moment rating became peak, and the rating at the final second became the end.

In these two studies, we found three key results. First, we replicate the classic duration neglect: peak and end had significant effect on overall evaluations while duration had a small, if any, direct effect.

Second, as we proposed, duration had an impact on peak/end. Specifically, longer duration led to more extreme peak and end ratings, which is consistent with escalation (Coombs and Avrunin 1977).

Third, and most importantly, we observed a significant indirect effect of duration through peak/end on evaluation, demonstrating that duration has a multiplicative influence on how people evaluate experiences. These results were observed in the six-clip (within-subject) design as well as in the first clip alone (between-subject) design. Therefore, using a design that replicates Fredrickson and Kahneman's (1993) original duration neglect study, we find evidence for an indirect effect of duration.

In a second set of three studies that replicate the original duration neglect design, we use longer or shorter sound clips each with a single, five-second amplified peak always placed fifteen seconds before the end. This manipulation ensures that duration to the peak varies between participants to be longer or shorter, but the peak and end are objectively identical. Participants again provided moment-to-moment ratings of three shorter (20 seconds) and three longer (60 seconds) otherwise pattern-less clips (blocks counterbalanced), and provided overall discomfort evaluations following each clip.

These three studies replicate the three main aforementioned results (duration neglect, a main effect of duration on peak and end, and a significant indirect effect) for the six-clip (within-subject) and first-clip alone (between-subject), demonstrating the generalizability of the results.

Therefore, in the first five studies using the Fredrickson and Kahneman (1993) design, we find a theoretically-important indirect effect of duration on evaluation through key moments (peak, end). We next use a different design in which we elicit peak and end pain without moment-to-moment ratings to bolster the generalizability of this finding.

To validate that duration has an impact on peak and end outside of moment-to-moment ratings, we ran a study in which participants rated *one of* peak pain, end pain, *or* global evaluations directly following each clip. As in the first set of two studies, participants again listened to three shorter (20 seconds) and three longer (60 seconds) pattern-less clips (blocks counterbalanced). This time, however, participants did not make moment-to-moment ratings.

Consistent with the moment-to-moment studies, direct ratings of the peak pain, direct ratings of end pain, and ratings of discomfort in global evaluations were also more severe for longer than for shorter clips.

To validate that we could observe our indirect effect of duration on global evaluation in a design without moment-to-moment ratings, we then ran a study in which participants rated *all of* peak pain, end pain, *and* global evaluations in a counterbalanced order following listening to each clip. Participants again listened to three shorter (20 seconds) and three longer (60 seconds) pattern-less clips (blocks counterbalanced).

This study replicated our three findings of interest: duration neglect, an impact of duration on peak and end, and a significant indirect effect of duration on evaluation through peak and end. Overall, this design provides additional evidence of a multiplicative impact of duration on evaluation.

We further replicated the aforementioned two studies without moment-to-moment ratings for the single-peaked aversive clips. The results from the two pattern-less clip studies held again for the two single-peaked studies, further cementing the generalizability of our results. These results also held when running a tenth study with the same duration (i.e., eighty seconds) but with the peak placed earlier or later in the sequence.

Ultimately, though duration may only have a small direct effect on evaluation after controlling for peak and end, we find in ten studies with over three thousand participants that duration can exert another, multiplicative indirect effect on evaluation though peak/end. Therefore, people may not neglect duration to the extent previously thought since duration affects the perception of key experiential moments (peak, end).

The Sign Effect in Past and Future Discounting

EXTENDED ABSTRACT

Consumer decisions are guided by their memories of past products and experiences, as well as their anticipation of future events (Hershfield et al. 2011; Baucells and Belleza 2017). In general, the more distant an event is in time, the less people care about it, a phenomenon known as temporal discounting (Frederick, Loewenstein and O'Donoghue 2002; Yi, Gatchalian and Bickel 2006).

A large body of work on temporal discounting has demonstrated that people discount future gains (positive events) more than losses (negative events) for an equivalent delay, a phenomenon known as the *sign effect* (Bilgin and LeBoeuf 2010; Mischel, Grusec and Masters 1969; Thaler 1981). The word "sign" here refers to "+" versus "-". For example, in a pilot study (*N*=200), when choosing between +$49 today or +$60 in three months, participants chose the "myopic" smaller, sooner reward 70% of the time, whereas when choosing between -$49 today or -$60 in three months, participants chose the "myopic" larger, later loss only 26% of the time, $z = 6.82$, $p < .001$.

Two prevailing accounts have been offered to explain the sign effect. The loss aversion account suggests that increased sensitivity to the magnitude of negative outcomes leads to lower discounting. In general, the perceived change in utility from a loss is larger than that from an equivalent gain (Kahneman and Tversky 1979). Therefore, losses seem more impactful, and thus are discounted less, than gains of equivalent magnitude (Baucells and Belleza 2017; Loewenstein and Prelec 1992). This possibility is supported by evidence of an inverse association between discounting of losses and activation in brain areas associated with the magnitude of negative events (Tanaka, Yamada, Yoneda, and Ohtake 2014).

The contemplation utility account suggests that the sign effect is driven by the greater emotional impact not of the negative event itself, but of waiting for it to occur. This possibility is supported by people's preference for expediting negative experiences associated with high amounts of dread (such as electric shocks; Loewenstein 1987), reflecting minimal discounting with delay. In contrast, people *do* prefer to delay negative experiences that are comparatively low in anticipatory discomfort (such as losing money), reflecting higher discounting with increasing delay (Berns et al. 2006). On this account, the intervening experience of contemplating the event drives discounting, not the perceived magnitude of the event itself. Similarly, enjoyment derived from waiting for a positive event, such as a vacation, could also reduce discounting of these events (Loewenstein 1987). However, the pleasure of waiting for a good experience is often mixed with negative emotion such as impatience, and tends to be felt less strongly than the pain of waiting for a bad experience (Hardisty, Frederick, and Weber 2011), leading people to discount positive events more than negative ones.

We provide a critical test to differentiate between the loss aversion account and the contemplation utility account: we systemati-

cally compare the discounting of future outcomes to the discounting of identical past outcomes. We hold constant both the valence and perceived magnitude of outcomes and measure the extent to which discounting is driven by the intensity of emotional experience while contemplating each type of event. Building on previous research linking discounting with intensity of anticipatory emotion (as distinct from predicted experience of the outcome itself; Harris 2012), we focus on assessing the emotional quality of the intervening period between the present moment and the event's occurrence. We extend this assessment to past events by examining the emotional intensity experienced while remembering the event (as distinct from recalled experience of the event itself). We define contemplation utility as the intensity of emotion associated with thinking about the event (either anticipating or remembering it).

In six studies using both real events (eating delicious vs gross flavored jellybeans; looking at photos of puppies vs cockroaches) and hypothetical scenarios (various financial and hedonic events) with students and MTurkers, we find that people's tendency to discount gains more than losses emerges for future events, but is reduced or eliminated for past ones. The sign effect emerges even when future positive and negative events are equated on subjective present impact, suggesting that it is not driven by loss aversion. Furthermore, the sign effect is mediated by contemplation utility: the emotional intensity from either anticipating or remembering the event. Although contemplation utility of future positive events is lower than that of future negative events across all six studies, there is no difference between contemplation utility of past positive and negative events.

These studies also reveal that the sign effect is uniquely related to the *mixed* nature of the contemplation utility of future positive events. The period of delay related to an upcoming positive event is characterized by both good feelings (e.g., happiness of anticipation) and bad feelings (e.g., impatience of waiting). In contrast, the period of delay related to an upcoming negative event is mostly dominated by negative emotion, with little positive emotion. Unlike people's experience related to future events, people's contemplation utility for past events—whether positive or negative—was of uniform quality consistent with the event's valence. People thus discounted past positive and negative events similarly.

Furthermore, we measure and rule out loss aversion, uncertainty, risk preferences, thought frequency, and connection to future/past self as alternative explanations. While these sometimes predict discounting (for example, we replicate the finding that greater connection to distant self leads to lower discounting, Hershfield et al. 2011), none of them explain the sign effect in the future or its reversal in the past.

Love is Patient:
People are More Willing to Wait for Things They Like

EXTENDED ABSTRACT

How does liking affect temporal discounting? For example, when someone really likes chocolate are they more or less likely to eat a sample of chocolate now instead of waiting to eat an entire bar later, compared to someone that likes chocolate less? One possibility is that liking yields impatience, as it is more difficult to resist the smaller-sooner option. People may be particularly tempted to receive items they like sooner because the heightened attractiveness leads to a strong visceral reaction that is hard to resist (Loewenstein 1996, 2000; Mischel, Shoda, and Rodriguez 1989).

However, in this research, we make the opposite prediction: Liking causes people to become more *patient*. We hypothesize that liking leads to patience because when people like something more they perceive a greater difference in subjective value between the smaller-sooner and larger-later options. Because people are more patient when the perceived values of the options are greater (Dai and Fishbach 2013), we predict liking leads to patience. We test this prediction across seven studies (N=2,262).

In Study 1 we found that liking was positively correlated with patience across a range of consumer decisions. Participants rated both how likely they would be to wait for a larger quantity or better quality version of a product as well as how much they liked the product. For example, participants rated how much they liked Broadway shows and how likely they would be to wait six months for front row seats to a show instead of watching it from the back row this weekend. We found positive correlations between liking and patience for larger quantity (r=.174, p<.001) and better quality (r=.154, p<.001) products.

In Studies 2a-2c we manipulated liking to causally explore its effect on patience. In Study 2a, participants selected their five favorite t-shirt designs from twelve possible options and then ranked the five t-shirts from first to fifth. We then randomly assigned participants to either a high liking or low liking condition. In the high liking condition, we selected the t-shirt ranked first and asked participants how likely they would be to wait six months for that particular t-shirt in the correct size, as opposed to receiving the same t-shirt one size too large this week. In the low liking condition, we selected the t-shirt ranked fifth and presented the same tradeoff. Participants in the high liking condition were more willing to wait for the correct size (F(1,398)=140.47, p<.001). We found similar results with mugs and bed comforters in Studies 2b and 2c (η_p^2>.03 for all). These results suggest that when people like a consumer product more they are more willing to wait for a better quality version of it, compared to when they like it less.

In Study 3 we examined the impact of liking on patience for larger quantities. We found that liking leads to patience not just for a better version of the target, as in Studies 2a-2c, but also for a larger amount of the target. Specifically, we presented participants with different categories of food and drink (e.g., cheese, coffee, granola bars) and asked them to identify, within each category, both their favorite type and a type they would be willing to consume, but was not their favorite. For example, within the cheese category, a participant might identify Gouda as their favorite type and cheddar as a type they would be willing to consume, but was not their favorite. We then asked participants if they would prefer a sample of the food or drink today or a whole portion of the food or drink in one month for either their favorite type (high liking condition) or the type that was not their favorite (low liking condition). For all items, participants were more willing to wait for a larger portion of their favorite item (Cramer's V>.15 for all).

Study 4 tested the process underlying the effect of liking on patience. We predicted that liking leads people to perceive a greater difference in subjective value between the smaller-sooner and larger-later options, thereby increasing patience. In this study participants followed the same procedure as Study 2a and also rated two measures of subjective value: how much they would enjoy and how often they would use both the correct size and larger size t-shirts. We again found participants were more patient in the high liking condition than in the low liking condition (F(1,384)=4.69, p<.05) and that the difference in subjective value between the correct size and larger size t-shirts was greater in the high liking condition (F(1,384)=8.97, p<.01). This difference mediated the effect of liking on patience (indirect effect=0.19, SE=0.07, 95% CI=[0.06,0.34]).

Finally, in Study 5 we tested for the alternative explanation that liking leads to patience because people are savoring the experience

of waiting. In this study participants followed the same procedure as Study 2c and also rated how likely they were to pay $3 to eliminate the wait for either their first favorite (high liking condition) or fifth favorite (low liking condition) bed comforter design. While participants were again more willing to wait for the preferred size in the high liking condition than in the low liking condition ($F(1,250)=11.83$, $p<.01$), they were also more willing to pay to receive the preferred size sooner in the high liking condition than in the low liking condition ($F(1,250)=12.16$, $p<.01$). Thus, when people like an item more they are both more willing to pay to receive the better version sooner, but also more willing to wait for it.

While liking might plausibly lead to impatience, as people consider the smaller-sooner option more tempting, we find that liking actually leads to patience. These findings not only provide a new theoretical insight into intertemporal choice, but also have important implications for marketers and consumers. We find that consumers are more patient for products when they like them more, and therefore individuals struggling to wait for a product may benefit from reminding themselves why they like the product they are waiting for.

Discounting a Lump-sum vs. a Payment Stream: More Payments leads to More Patience

EXTENDED ABSTRACT

Consumers' decisions pertaining to the future involve tradeoffs between immediate and delayed outcomes. For example, consumers decide whether they want to pay more for faster shipping, and a consumer must between buying a new OLED TV today or delaying buy a bigger TV for less in a few months. In making such decisions, consumers tend to be impatient, heavily discounting the future at the expense of the present (e.g., Malkoc et al. 2010; Zauberman et al. 2009).

While a vast literature has explored how and why consumers make these delay and expedite decisions, researchers have exclusively studied lump-sum outcomes (e.g., $1200) and have mostly ignored *payment streams* or *annuities* (e.g., 12 monthly payments of $100). The implicit assumption is that there should be no difference between these decisions. This distinction is important because many consumer outcomes are streams of payments (or services) over time (i.e., monthly streaming services, paychecks, delaying social security benefits, etc.). In this research, we compare how consumers delay lump-sum payments to equivalent streams of payments. We demonstrate that framing the same outcome as a stream of payments (as opposed to the equivalent lump-sum payment) not only leads to more consumer patience (i.e., lower discount rates), but also decreases present bias (i.e., inconsistent discount rates). These findings identify a simple way to decrease consumer impatience and de-bias a common choice anomaly, which has important implications for financial decision-making and consumer well-being.

Study 1 was a 2(Payment Type: Lump-sum vs. 12 Monthly Payments) x 2(Time: 1 Month vs. 3 Months) within-subject design. Thus, participants responded to four scenarios. To equate the value of receiving a single lump-sum at time zero (t_0) and 12 monthly payments, we asked participants (80 undergraduates) what how much they would need to be paid each month for 12 months to be indifferent with a lump-sum of $1200 today. Then, in the monthly payments condition, we asked participants the least they would be willing to accept (WTA) to delay these 12 payments for one month and for three months. In the lump-sum condition, participants indicated their WTA amount for one $1200 lump-sum by one month and three months. We then asked several questions to rule out alternative explanations. We converted all values to monthly premiums to conduct analyses.

Consistent with past literature, participants were present bias: Participants required higher monthly premiums for delaying for 1 month (M=98.22) than 3 months (M=83.59; p=.055). We also found a main effect for payment type: participants were more patient for a stream of payments (M=71.77) compared to a lump-sum (M=110.04; p<.01). Importantly, we found that present bias (time) was moderated by payment type (p<.05): There was present bias in the traditional lump-sum condition, but not in the payment condition. Further, we found no evidence that the effects were driven by differences in regret, excitement, disappointment, risk aversion/seeking, or changes in perception of time.

Study 2 (N=485 Mturkers) was a 5(Payment Type: Lump-sum, 2 Payments every 6 months, 3 Payments every 4 months, 6 Payments every 2 months, 12 Payments every month, between) x 2(Time: 3 Months vs. 6 Months, within) mixed design. In the lump-sum condition, participants indicated their WTA to delay $1200 by 3 months and 6 months. In the payment conditions, we first elicited equivalent payments for receiving $1200 at t_0 if they were delivered in 2/3/6/12 monthly payments (depending on condition) and then asked their WTA to delay these payment stream for 3 and 6 months. As before, analyses using monthly premiums as the dependent measures revealed a main effect of time ($M_{3months}$=116.63 vs. $M_{6months}$=104.65; p<.001) demonstrating present bias. Replicating study 1, participants were more patient for a payment stream than the lump-sum ($M_{lump-sum}$=162.28 vs. M_{stream}=110.64; p<.001). Further, we also that present bias was moderated by payment type, such that lump-sum led to greater present bias compared to the payment stream conditions ($M_{lump-sum}$=25.15 vs. M_{stream}=9.44; p<.01) and there was less present bias as the monthly amount increased (p<.05).

In Study 3, we explored the process behind our effect by examining whether consumers are focusing on the first payment in a payment stream while neglecting future payments. To that end, we had a 3(Lump-sum vs. Payment Stream vs. First Payment) design, where 109 MTurkers were asked to delay payments one month. In the lump-sum condition, participants indicated their WTA to delay $600. In the payment stream condition, they indicated their WTA to delay $600 in 4 payments of $150 for the next 4 months. Finally, in the first payment condition, participants indicated their WTA to delay $150 (equivalent amount of delaying the first payment in the payment stream). We also wanted to rule out amount perceptions as an alternative account and asked participants to indicate how large the amount felt like (100-point slider scale). Once again the results showed that partisans were more patient towards the payment stream (M=99.4) than the lump-sum (M=248.95; p <.001). Further, the payments stream was not different than simply delaying $150 (M=72.97, p=.46), suggesting that participants are focusing on the first payment while neglecting future payments. We examined perceived amount as an alternative explanation and found it cannot explain these results: The lump-sum (M=70.25) and the payment stream (M=65.83) did not differ (p=.46), and both felt larger than the first payment amount only (M=54.44; p's <.05), and our effect remained significant (p < .001) controlling for perceived amount.

Our findings suggest that that consumers become more patient and provide more consistent preferences as the monthly amount decreases (study 2) and study 3 provides further evidence that this effect is due to consumers focusing on the first payment in a payment stream while neglecting future payments. This view of a payment stream, while myopic, has the ironic effect of making consumers more patient, which could increase their long term financial well-being.

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Perceptions of AI and Algorithmic Decision Making

Chairs: Gizem Yalcin, Erasmus University, the Netherlands
Nofar Duani, New York University, USA

Paper #1: Risk Seeking Preferences Lead Consumers to Reject Algorithms in Uncertain Domains

Berkeley J. Dietvorst, University of Chicago, USA
Soaham Bharti, University of Chicago, USA

Paper #2: The Expert vs. the Algorithm: Consumers' Perceived Competence Impacts Their Valuation of Product Recommendations

Gizem Yalcin, Erasmus University, the Netherlands
Anne-Kathrin Klesse, Erasmus University, the Netherlands
Darren Dahl, University of British Columbia, Canada

Paper #3: Unfair but Also Unbiased: How Consumer Acceptance of Price-Setting Algorithms Depends on the Basis of Price Discrimination

Nofar Duani, New York University, USA
Alixandra Barasch, New York University, USA
Vicki Morwitz, Columbia University, USA

SESSION OVERVIEW

Technological progress and data proliferation have made algorithms and Artificial Intelligence increasingly widespread. Despite reports in the literature of general algorithm aversion, these technologies are frequently used by consumers and firms to provide "wisdom" and make decisions in a wide array of consumer-relevant domains. Their rapid adoption raises several questions with important implications for markets and consumers. The papers in this session help answer the following questions: When do consumers prefer algorithms to human decision- making? How is the use of algorithms changing common consumer judgments and reactions to marketing outcomes?

The first two papers identify contextual and individual factors that influence consumers' evaluations of algorithmic decisions. In the first paper, **Dietvorst and Bharti** demonstrate that consumers' acceptance of algorithms depends on the nature of the decision environment. Five studies show that consumers are more likely to use algorithms when inherent uncertainty in the forecasting task is low. Consumers' algorithm aversion under high uncertainty is driven by their preference for a forecaster that they believe is more likely to make a near perfect forecast, not a forecaster that they believe will perform better on average. In the second paper, **Yalcin, Klesse, and Dahl** identify which consumers are more likely to value algorithmic recommendations.

Across seven studies, they find that individuals with higher (vs. lower) levels of perceived competence in the focal domain value recommendations more when they were generated by algorithms (vs. human experts). This is because individuals with higher perceived competence believe they can learn more from an algorithm than an expert, while the opposite is true for individuals with lower perceived competence. The third paper explores how consumers perceive the fairness of decisions made by algorithms versus humans. **Duani, Barasch, and Morwitz** examine how the use of price-setting algorithms affects consumers' fairness perceptions and consequent choices. The results of four studies show that consumers' reaction to price discrimination by algorithms depends on the information they use. When the basis for price discrimination violates a social norm, that violation is perceived as more fair when believed to be executed by algorithms (versus humans).

This session provides timely insight into how consumers understand and respond to decisions made by algorithms, an increasingly important topic given the proliferation of this technology in consumer-contexts. Together, these three papers identify a wide array of factors that moderate consumers' tolerance and acceptance of algorithms and decisions made by them. This session directly addresses ACR's call for papers that generate new knowledge on how consumers make decisions in the age of new technology, including AI. This session should be of interest to scholars working on choice and decision-making, uncertainty, recommendations, fairness, pricing, morality, and new technologies.

Consumers Underuse the Best Possible Algorithm in Inherently Uncertain Environments Because They Are Risk Seeking in the Domain of Error

EXTENDED ABSTRACT

Will consumers use self-driving cars, robot doctors, and other algorithmic decisionmakers once the technology is widely available? How well will these algorithms need to perform in order for consumers to embrace them?

In many decision domains, algorithms already outperform humans (see Ægisdóttir et al., 2006; Camerer, 1981; Dawes, Faust, & Meehl, 1989; Grove et al., 2000; Kaufmann, Reips, & Wittmann, 2013; Kaufmann & Wittmann, 2016; Kuncel, Klieger, Connelly, & Ones, 2013; Meehl, 1954). However, people often fail to use algorithms, even when an algorithm is the best forecasting option available (see Arkes, Dawes, & Christensen, 1986; Dietvorst, Simmons, & Massey, 2015; Estes & Straughan, 1954; Fildes & Goodwin, 2007; Sanders & Manrodt, 2003; Vrieze & Grove, 2009). Despite providing ample evidence that algorithms often outperform human judgment and that humans sometimes underuse algorithms, it is still unclear why people underuse algorithms.

In this paper, we generate forecasting tasks and let participants choose whether they want to use the best possible algorithm in order to learn under what conditions people will fail to use *any* algorithm. We also identify one important factor that causes people to underuse algorithms – irreducible uncertainty (uncertainty that cannot be resolved until an outcome is realized e.g. knowing which side a coin will land on). We manipulate the amount of irreducible uncertainty in our forecasting tasks and find that people are less likely to use the optimal algorithm the more inherently uncertain a forecasting task becomes, even though the optimal algorithm is always the best performing option. We probe further and find that people exhibit this behavior because they choose the forecaster that they believe is more likely to make a near perfect forecast, not the forecaster that they believe to perform better on average. This decision strategy creates risk seeking preferences. When the amount of irreducible uncertainty in the forecasting task is high, making a near perfect forecast improbable for even the optimal algorithm, people reject any algorithm and turn instead towards more uncertain, riskier (and often worse) options like human judgment.

In all studies, we created a judgement task where judges predicted an "outcome number" that was a function of three provided "input numbers." This setup was meant to mimic real life scenarios like assessing products or investments based on a list of attributes.

Participants completed 20 practice trials where they got feedback on each judge's performance. In Studies 1 through 4, the two judges were the participants themselves and the best possible algorithm. In Study 5, the judges were two different algorithms. After these 20 trials, the participants decided which judge's answer they would like to use for a future incentivized trial, where they would gain more money the closer their chosen judge was to the actual outcome.

Finally, participants reported their beliefs about each judge's performance.

In all studies, we manipulated the irreducible uncertainty in the task between subjects to see how different levels and types of irreducible uncertainty affected participants' choice of the algorithm. In all studies, the algorithm was the optimal algorithm for the judgment task. This algorithm used the same equation that generated the outcome number (given the three input numbers) and added the expected value of any irreducible uncertainty. Thus, the algorithm made the best possible forecasts.

In Study 1, we assigned participants to one of five conditions with increasing irreducible uncertainty. The algorithm performed substantially better than did participants in each condition ($ps< .001$) and participants recognized that it performed better on average in each condition ($ps<.001$); however, they chose it significantly less often the more irreducible uncertainty there was in the forecasting domain ($p< .001$). We found direct mechanism evidence in Studies 2 through 4. In Study 2, we replicated the results of Study 1 ($ps< .001$) and found that participants' beliefs about which forecaster was more likely to be near perfect mediated the effect of irreducible uncertainty on their choices (.043, .122), instead of their beliefs about which forecaster was better on average (-.038, .015). In Studies 3 and 4, we manipulated the variance of the algorithm between conditions (holding average performance fixed) and found that participants were more likely to pick the algorithm when it exhibited higher variance ($ps<.001$), consistent with risk seeking preferences. In Study 5, we found that people also gravitate towards higher variance options when they choose between two algorithms ($p< .001$), which suggests that these risk seeking preferences generalize beyond choices between humans and algorithms.

These results suggest that convincing consumers to use algorithms in inherently uncertain domains is not a case of waiting until technology improves and algorithms perform better than they do today– people even underuse algorithms that offer the best possible performance. To the extent that choosing between products, driving, making medical decisions, investing, forecasting consumer demand, and other types of decision-making are inherently uncertain, people may be unwilling to use algorithms to make those decisions, even if those algorithms offer the best performance possible. The impact of this refusal is substantial, as society may not be able to fully benefit from technological progress in consequential but uncertain domains until people are willing to use algorithms to make inherently uncertain predictions.

The Expert vs. the Algorithm: Consumers' Perceived Competence Impacts Their Valuation of Product Recommendations

EXTENDED ABSTRACT

Nowadays customers receive product recommendations from humans (e.g., travel experts) and/or algorithms. Interestingly, companies utilize different strategies when it comes to explaining the source of the recommendation to their customers. Whereas some companies (e.g., Wix.com) communicate that the recommendation was generated by an algorithm, others disguise the algorithm and suggest that the recommendation stems from a human expert (e.g., Stitch Fix). This raises the question whether recommendations are valued more or less depending on the framing of its source (i.e., an algorithm or human expert). Notably, existing research shows conflicting results: whereas ample research documents that individuals are reluctant to follow algorithmic recommendations (e.g., Yeomans et al., 2019), recent work suggests that individuals rely more on algorithmic advice than human advice (Logg et al., 2019).

We intend to resolve this controversy by incorporating an important characteristic— perceived competence—of the recommendation recipient. Essentially, we put forward that as consumers' perceived competence in a focal domain increases (vs. decreases), they value a recommendation more when it is framed to be generated by an algorithm (vs. a human expert). We argue that this variation in valuation is due to differences in the extent that individuals believe they can learn something from the recommender (algorithms vs. humans). As recommendation-recipients' perceived competence increases they might see little added value of the advice from human experts because they believe to possess similar information and capabilities. This reasoning is built on research demonstrating that individuals with confidence in their own abilities discount expert advice (Tost et al., 2012) but seek access to information that they do not possess themselves (e.g., Budescu & Rantilla, 2000); the latter suggests that individuals with high perceived competence might value algorithmic advice more because it provides them with access to different insights (e.g., Bonaccio & Dalal 2006; Van Swol & Ludutsky 2007; Yaniv 2004a, 2004b).

Conversely, as individuals consider themselves as not knowledgeable or unskilled (i.e., low perceived competence), they might value human experts' advice more because they lack the knowledge of basic concepts (Alba & Hutchinson, 2000) and competence that experts have.

This reasoning is in line with previous work demonstrating that patients tend to follow physicians' recommendations rather than algorithmic advice (Promberger & Baron, 2006). Moreover, the same literature indicates that people tend to use advice coming from other humans when the task is perceived to be difficult (e.g., Gino & Moore, 2007). As human-based (vs. algorithmic) recommendation processes are perceived to be as easier to understand (Yeomans et al., 2019), we argue that consumers might value human-based (algorithmic) recommendations more as their perceived competence decreases.

Seven studies test our predictions. In each study, participants received a concrete context (e.g., planning a trip), and were told about a service that provides personalized recommendations. We utilized five different domains (i.e., travel routes, jokes, brand names, coffee, Halloween costumes) to test generalizability and robustness of our effect. Depending on the condition, the service was either framed to utilize an algorithm or a human expert to generate recommendations. We assessed participants' valuation of the recommendation (e.g., willingness to pay for the service and signing-up for the service) and measured (or manipulated) participants' perceived competence in a focal domain. Whereas a pilot study provides correlational evidence in the field that individuals with higher (vs. lower) levels of perceived competence in a domain value a service that provides algorithmic recommendations more, the remaining studies (studies 1-4) provide experimental evidence for the interaction effect. In each study, as individuals' perceived competence in a focal domain increased, they valued a recommendation more when it was framed to be generated by an algorithm (vs. a human expert) whereas as their perceived competence decreased, they valued a recommenda-

tion less when the recommendation was framed to be generated by an algorithm (vs. a human expert).

Essentially, study 2 also highlights that recommendation-recipients differ in the extent they think they can learn from algorithms vs. humans depending on their perceived competence in a focal domain: as their perceived competence increased, individuals believed that they could learn more from an algorithm but as perceived competence decreased, individuals believed that they could learn more from a human expert. Importantly, this difference in beliefs also mediated the effect on valuation of the recommendation (PROCESS Macro, Model 8; Hayes, 2013; ab= -.23, se= .09, CI 95%[-.41,-.07])[1].

We believe that our work provides novel insights on the impact of algorithms on consumer judgment and decision making. First, by keeping the recommendation constant and only varying the framing of its source, we explore whether there are differences in perception merely as a consequence of different sources. Most importantly, we contribute to the literature by resolving the contradictory findings on consumers' reactions to algorithmic and human-based recommendations (e.g., Dietvorst et al., 2015; Dzindolet et al., 2002; Logg et al., 2019) by incorporating recommendation recipients' perceived competence as an important moderating variable. Third, our research explores individuals' reaction to algorithmic advice in domains which depend heavily on personal taste, thus adding to the recent work on algorithms in subjective domains (e.g., Logg et al., 2019; Yeomans et al., 2019). Additionally, our findings are relevant to companies that provide product recommendations to their customers; they could use customers' perceived competence as a segmentation variable to decide on how to best communicate the source of a recommendation.

Unfair but Also Unbiased: How Consumer Acceptance of Price-Setting Algorithms Depends on the Basis of Price Discrimination

EXTENDED ABSTRACT

Price fairness is a fundamental consumer concern (Campbell, 1999; Xia, Monroe, & Cox, 2004). Consumers are averse to inequitable outcomes and avoid sellers perceived to use unfair tactics (Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999). Consumers' fairness concerns are therefore an important input to and constraint on managers' price setting behavior.

Importantly, rapid technological advances are now reshaping the way managers set prices, challenging previously established notions of "fair market behavior."

Specifically, data proliferation now makes it easier than ever for managers to use dynamic or discriminatory pricing practices to tailor prices to individual consumers (Haws & Bearden, 2006; Kannan & Kopalle, 2001). Managers often rely on algorithms or bots to dynamically set targeted prices. While consumers tend to be averse to price discrimination tactics and perceive them as unfair (Garbarino & Lee, 2003), prior research has not explored whether their reactions differ if the price setting process is determined by a non-human algorithm versus a human.

In general, consumers may distrust algorithms more than humans because they perceive them as lacking a moral compass. Unlike human decision makers, who are bounded by ethical and moral considerations, nonhuman technologies have no such conscious-

based limitations. Consumers may also perceive the use of price-setting algorithms as providing firms with an unfair advantage.

However, we propose that when the pricing policy violates social norms, the same price-setting practices may seem fairer when they are executed by algorithms versus humans. The belief that algorithms have no sense of intent and cannot form judgments may protect consumers from feeling personally targeted or discriminated against, and may also alleviate consumers' privacy concerns. For these reasons, we predict that consumers will hold algorithms to a different moral standard and be more forgiving towards their biased actions.

The first two studies provide initial support for algorithm aversion in the context of demand-based dynamic pricing. In study 1 (N = 441) participants imagined they had just found a winter jacket, a rental car, or a hotel that suited their needs. They then learned that the product's price changes over time to meet demand, and that the current price is 50% higher than average. In the algorithm (human) condition, participants learned that an automated bot (sales manager) was responsible for setting prices. Compared to participants in the human condition, those in the algorithm condition considered the price-setting process to be less fair (M_{Human}=3.28, $M_{Algorithm}$= 2.92; $F(1,437)$= 5.06, p= 0.02). They also reported being angrier at the price setting process and predicted they would enjoy their purchase less (Fs> 4.65, ps< 0.03). Study 2 (N= 534) replicated this algorithm aversion in three new domains (produce, baseball tickets, or theater tickets). Participants in the algorithm condition again considered the price setting process to be less fair, felt angrier at the price setting process, and expected to enjoy the purchase less (Fs >5.08, ps< 0.02). They also considered the price itself to be less fair, and reported lower willingness to purchase the product (Fs> 4.79, ps< 0.03).

We next examine what happens when pricing is based on information that feels more personal, such as consumers' demographic characteristics. Study 3 (N= 256) tested this in a 2 (price setting agent: human vs. bot) x 2 (basis for price discrimination: temporal vs. demographic) between-subjects design. Participants imagined purchasing tickets to a local theater. In the temporal condition, similar to the previous two studies, prices changed based on when the consumer was making the purchase (how many days before the show, day of the week, time of day they are shopping). In the demographic condition, prices varied based on consumers' personal characteristics (age, gender, race/ethnicity). Overall, participants found the price, the price setting process, and the theater to be more fair in the temporal condition than in the demographic condition (Fs> 4.59, ps< 0.03). However, these main effects were qualified by significant interactions (Fs> 5.68, ps< 0.02), such that participants demonstrated algorithm aversion in the temporal condition (replicating the findings from Studies 1 and 2), but the opposite in the demographic condition. When prices were determined based on personal demographics, participants instead reacted more positively in the algorithm than the human condition. Significant interactions and similar patterns emerged for all other previous measures: likelihood to buy, anger, and expected enjoyment (Fs> 5.79, ps< 0.02). Thus, although consumers are often averse to nonhuman technologies setting prices, they can also be more forgiving of them when price discrimination violates social norms.

Study 4 (N= 421) had the same design as study 3 but also included a control condition, in which participants simply learned of the price-setting practice without any information about who was responsible for implementing them. The results replicated the findings from study 3: participants in the demographic-based price discrimination condition considered the price and the price setting process to be more fair when executed by a bot than a human (Fs >3.84, ps<

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1   In study 2, we also added another framing that companies use: data scientist, a human expert but with a focus on analytical skills. Result of our analysis revealed that the slopes of our two human framings (i.e., human expert, data scientist) were not significantly different (p = .26).

0.05). They also expected to enjoy their purchase more and reported a higher willingness to buy the product in the bot condition (Fs> 7.2, *p*s< 0.003). Interestingly, across all these outcomes, the control condition was statistically different than the bot condition (Fs> 3.90, *p*s< 0.05) but not from the human condition (Fs< 0.4, *p*s> 0.5), suggesting that the effect is driven by an increased willingness to accept demographic-price discrimination when executed by algorithms.

These results indicate that consumers don't always respond negatively to the use of algorithms to implement price discrimination policies. When the basis for price discrimination violates a social norm, the violation is more easily forgiven when believed to be executed by non-human technologies, which aren't expected to know any better. These findings have practical implications for how firms communicate about their price-setting strategies: the use of algorithms may make consumers more willing to accept pricing practices that are usually considered unfair and morally flawed. Thus, our results suggest that the same technological advances that are now making it easier for companies to implement price discrimination practices, may also act to legitimize them in the eyes of consumers.

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Children as Consumers: Children's Affective and Cognitive Processes for Financial and Health Decisions

Chairs: Michal Maimaran, Northwestern University, USA
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Paper #1: Show Them the Money: Children's Affective Responses to Spending and Saving Predict Their Spending Behavior

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Susan A. Gelman, University of Michigan, USA
Scott I. Rick, University of Michigan, USA

Paper #2: Use of Sensory Food Imagery to Drive Children to Choose Smaller Portions of Healthy and Unhealthy Snacks

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Camille Schwartz, INRA, France
Christine Lange, CNRS, France
Yann Cornil, UBC, Canada
Pierre Chandon, INSEAD, France

Paper #3: Using Coupons to Motivate Children to Purchase Healthy Snacks in Boston-Area Convenience Stores

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Paper #4: Children are Price Sensitive Too: Using Price Promotions to Increase Children's Choice of Healthy Food

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SESSION OVERVIEW

Substantial research has documented the manner in which well-resourced adults make financial and health decisions (e.g., Lynch, 2011; Rolls et al., 2000). However, much remains unknown regarding unique consumer segments like children. This session responds to ACR 2019's mission of becoming wise through understanding the decision-making processes of *under-heard and under-represented segments*; specifically, we explore the affective processes (Papers 1 and 2) and cognitive processes (Papers 3 and 4) underlying children's financial behaviors (Papers 1, 3, and 4) and health decisions (Papers 2-4).

These four papers are all in advanced stages, conducted by scholars around the world, and studied children in developed and developing countries (the U.S., France, and Panamá). Together, these papers bridge discoveries on children of various age groups (e.g., 5-10, 6-11, and 10-12 years old), employ a diverse set of methodologies (field experiments in elementary schools in France and Panamá, naturalistic observational intervention in U.S. convenience stores, focus groups, surveys, and a longitudinal study), and reveal rich insights on how children act as consumers.

First, Echelbarger, Gelman, and Rick (Paper 1) studied the origins of spendthrift-tightwad tendencies in childhood, and importantly the developmental course of these tendencies. They found that children's spendthrift-tightwad scores significantly predicted their spending behavior, and parents were generally tuned into their children's feelings about money. Additionally, children retained the same affective orientation about money over time. Nicklaus, Schwartz, Lange, Cornil, and Chandon (Paper 2) explored children's affective

responses to food. Two field studies in three elementary schools in France, found that children's pleasure forecasts of different portions for unhealthy and healthy food were relatively accurate. Furthermore, their sensory-based intervention, encouraging children to imagine the food's taste and aroma, effectively reduced children's chosen quantity of unhealthy foods.

Cash, McAlister, Economos, Lehnerd, Howell, and Plank (Paper 3) took a cognitive approach to explore children's food choices. They used economic incentives (i.e., coupons of price discounts) to nudge children toward healthier options and worked with four Boston area convenience stores to introduce coupons in two nine-month phases. They found that coupons played a role in nudging children towards healthier snack purchases. Additionally, children were not using the money they saved to buy additional snacks, thus possibly saving money. Lastly, Huang and Maimaran (Paper 4) partnered with UNICEF to launch field experiments in three elementary schools in Panamá, also leveraging economic incentives (i.e., coupons of price discounts) to increase children's healthy choices. They tracked children's redemption of food coupons at schools' kiosks for weeks, and uncovered that the effectiveness of economic incentives on children's food choices depended on message complexity, age, and repeated exposure.

In concert, these four papers highlight the importance of examining the affective and cognitive processes underlying how children process information, perceive value, and make financial and health decisions. This session not only provides novel theoretical insights, but also has critical practical importance for children's welfare and marketing practices targeting children. We believe that this session will have a broad appeal to researchers studying children across socioeconomic status, age, and nationalities.

Show Them the Money: Children's Affective Responses to Spending and Saving Predict Their Spending Behavior

EXTENDED ABSTRACT

Different feelings linked to spending are associated with different financial outcomes in adults. For example, people who spend more than they would like ("spendthrifts") carry more credit card debt than people who spend less than they would like ("tightwads") (Erner et al., 2016; Rick, Cryder, & Loewenstein, 2008). Subsequent work exploring the financial implications of these orientations shows that spendthrifts and tightwads can be situationally induced to engage in different spending and saving practices, perhaps helping spenders with these different orientations to make better financial decisions (e.g., Frederick et al., 2009; Thomas, Desai, & Seenivasan, 2011). This increase in attention to spending (and saving) profiles is associated with an overall increase in attention to improving adults' financial behaviors (e.g., Lynch, 2011).

Perhaps the most common question stemming from this research is how one becomes a tightwad or spendthrift in the first place. Surprisingly, little is known regarding the origins of spendthrift-tightwad tendencies in childhood. Instead, existing work with children tends to describe children's understanding of concrete aspects of everyday monetary behaviors (e.g., saving, allowance) and parental socialization regarding these behaviors (e.g., Ashby, Schoon, & Webley, 2011; Berti & Bombi, 1988; Otto et al., 2006; Webley,

2005). An important but less explored issue is how attitudes around spending and saving develop, how they relate to parental attitudes, and how they change over time. Given the financial and hedonic implications of these orientations, it is imperative that we study their origins and developmental course.

Recently, Smith and colleagues adapted the adult Spendthrift-Tightwad Scale for children aged 5-10 years and found that children within this age range can accurately report on their feelings about spending and saving, and that these feelings predict spending behavior above and beyond how much they like items offered for purchase (Smith et al., 2018). Though novel, this work was just a first step in assessing children's affective responses to spending (and saving) money.

In the present study, 207 children 5-10 years (M=8.00 years; SD=1.69 years; 103 boys) and their parents completed surveys evaluating their affective responses to spending and saving. Children completed the 7-item child-adapted Spendthrift-Tightwad (ST-TW) Scale (based on the Berkeley Puppet Interview; Measelle et al., 1998). Sample items included forced-choices between: *I like saving money* vs. *I like buying new things*; *I think carefully before spending my money* vs. *I buy things without thinking too much*. Parents completed the adult version of the Spendthrift-Tightwad Scale for themselves (possible range: 4-26) and the child-adapted version of the scale for their child (possible range: 0-7). For both scales, higher scores indicated more spendthrift tendencies. At the conclusion of the study, children received $2.00 in quarters, any of which they could save or spend in a small lab "store" that included various toys available for purchase.

Responses to the child-adapted scale were summed for children (M=2.01; SD=1.42) and adults (M=3.40; SD=1.79). Parent responses to the adult scale for themselves were also summed (M=14.38, SD=4.11). As has been observed in adults, the overall distribution of child-reported scores was heavily skewed towards "tightwaddism." We first tested bivariate associations between child-reported ST-TW scores and: child age, parent-reported ST-TW scores for themselves, parent-reported ST-TW scores for their child, and money spent in the store. Child-reported ST-TW scores were positively associated with child ST-TW scores as reported by parents (.31, p<.001) and with money spent in the store (.18, p=.008). That is, children who saw themselves as more "spendthrifty" were reported as such by their parents via the child ST-TW Scale, and more "spendthrifty" children spent more in the store. Interestingly, though, parents saw their children as more "spenthrifty" than children saw themselves (p<.001), consistent with Frederick (2012)'s discussion of participants overestimations of others' willingness to pay. No other significant associations emerged: parents' and children's self-reported ST-TW scores were not associated, nor was child age associated with ST-TW scores as reported on by children or their parents. Next, we tested whether child ST-TW scores predicted amount spent in the store after adjusting for age, gender, and liking of the items offered. Children's self-reported ST-TW scores significantly predicted spending behavior (p=.023) above and beyond child age, child gender, and how much they liked the items in the store.

Though the results above speak to the accuracy and predictive utility of children's responses, they do not address whether orientations are stable over time. To test this, we invited approximately half of our sample (N=85) to return to the lab for a second visit roughly 1-3 years after their initial visit (average gap 2.08 years). Children's self-reported ST-TW scores at Time 1 were positively associated with their self-reported scores at Time 2 (.40, p<.001; M_{T1}=1.98 vs. M_{T2}=1.89). More specifically, 62% of children retained the same orientation categorization across time, and no child categorized as a

tightwad (score: 0-1) at Time 1 shifted to a spendthrift (score: 6-7) categorization at Time 2.

Consistent with prior work, we found that children's feelings about spending and saving are associated with their observed spending behaviors. Our novel contributions include the finding that child-reported ST-TW scores and parent-reported perceptions of their child (as assessed via the child-adapted scale) were associated, supporting the validity of children's self-report regarding their money-related feelings, as well as the finding that children's ST-TW scores were relatively stable over time. This latter result supports the notion that these orientations develop early and are persist across time. Lastly, in addition to the measures reported on here, we also recorded parents and children discussing money-related topics (e.g., spending, saving, earning money, post-purchase regret) while looking through a picture book designed to generate such discussion. We discuss also the relation between children's orientations and the discussions they have with their parents about money-related topics. Ultimately, results from this line of work may inform efforts to promote better financial health across the lifespan.

Use of Sensory Food Imagery to Drive Children to Choose Smaller Portions of Healthy and Unhealthy Snacks

EXTENDED ABSTRACT

Childhood obesity, despite a recent stabilization, still concerned 14.5% of 3-14 years-old French children in 2007 (Péneau *et al.,* 2009). Obesity could account for 2-7% of health costs in France, and childhood obesity could cost up to $19,000 per child's lifetime (Finkelstein *et al.,* 2014). Both the qualitative and the quantitative components of eating behavior (i.e. "what" and "how much" is eaten) strongly determine the children's nutritional status, which may be a risk for their present and future health, as sub-optimal behaviors may lead to energy imbalance, and ultimately overweight and obesity. Thus, it is critical to consider the potential levers to shape children's eating behavior. Research along this line can guide population-level interventions for children and their parents, provide critical implications for public health policies, beyond traditional health-based interventions that tend to produce weak effects (Wolfenden et al., 2012; Rekhy & McConchie, 2014).

Just like adults, children are heavily influenced by portion and package size (Rolls et al., 2000). The food portions of packaged snacks have grown so much that today's child portions are often larger than adult portions in the past (e.g., the 25-33cl "child-size" soda cup in fast-food restaurants vs. the traditional 19cl adult size bottle). Larger food packages and portion sizes and larger plates and glasses can significantly increase children's energy intake during lunch with no compensation effect on later meals (Hetherington *et al.*, 2018). How can we explain children's preference for large quantities, and how can we increase the attractiveness of smaller portion sizes?

Our central hypothesis is that children (just like adults) may fail to anticipate that the sensory pleasure of eating declines with food quantity (sensory-specific satiation; Rolls et al. 1981), but being asked to recall the sensory experience of eating foods that they like (a "sensory food imagery" intervention; Papies et al. 2012) could help them realize that smaller portions are actually best for sensory pleasure (Cornil & Chandon, 2016). First, we investigated children's pleasure forecasts for palatable foods which can be classified as unhealthy (e.g., energy-dense, chocolate brownie) or healthy (e.g., low in energy, applesauce). Then we compared these forecasts to the actual pleasure experienced from eating different portions of these foods (on different days). Our hypothesis is that pleasure fore-

casts will be particularly biased for indulgent desserts, and less so for healthier foods which exhibit less sensory-specific satiation (Redden & Haws 2013). Then, a short intervention was developed based on sensory imagery which was administered by experimenters in school cafeterias at the afternoon snack time (~4 PM). This intervention encourages children to imagine the taste, aroma, and texture of eating palatable foods (which exhibit strong sensory-specific satiation) before their portion size choice. We tested whether sensory imagery reduces the portion sizes of the healthy or unhealthy foods chosen by children in intervention vs. control group; we also measured actual food intake, and post-meal enjoyment and satiety. The studies were approved by the relevant local IRB (CPP Est 1). They were conducted in three primary schools in Dijon, France.

The objective of the first field experiment was to measure the effect of portion size on (pre-intake) anticipated and (post-intake) experienced hunger, eating enjoyment, and healthiness ratings among 8-11 years old children for two snacks differing in energy density and healthiness perception (chocolate brownie vs applesauce), in order to investigate potential anticipation errors related to portion size. To do so, we first asked children aged 8-11 (N=83) to anticipate their post-intake eating enjoyment and residual hunger for the recommended serving size, a 50% larger portion, and a 125% larger portion of brownie or applesauce. We asked them to rate how healthy it would be to eat each portion. Over six subsequent afternoon sessions, the children ate each of these portions and then rated them on the same scales used in the first session. In each session, we also measured initial hunger. The results show that portion size strongly reduced post-intake residual hunger for both snacks. Portion size only increased post-intake eating enjoyment for brownies, not for applesauce, and this effect increased with hunger for both snacks. When the children were only slightly hungry, rather than very hungry, eating enjoyment was unrelated to portion size. Healthiness ratings were significantly higher for applesauce than for brownies and were largely unaffected by portion size. Unlike what was reported for adults in prior studies, these effects of portion sizes were fairly accurately anticipated by the children.

The objective of the second field study was to test how sensory food imagery influenced portion size choice and intake of chocolate brownie and applesauce by 8-11 years old children. In the food sensory imagery condition, children (N=84) were asked to imagine vividly the taste, smell and oro-haptic sensations of eating three hedonic foods. The children (N=87) in the control condition were asked similar questions, but for non-food related activities, such as being at the beach. After measuring initial hunger, both groups were then asked to choose between the recommended serving size, a 50% larger portion, and a 125% larger portion of either chocolate brownie or applesauce. One week later, the children went through the same procedure, but were asked about a different set of snacks. There was a significant interaction between the intervention and the type of snack (*p*<0.01). Compared to the control condition, sensory food imagery led children to choose 7 % less brownie on average (*p*<0.01). However, it had no effect on either the quantity of applesauce chosen or consumed (*p*=0.31 for both). Hungrier and heavier children chose and ate more, with no differences between boys and girls.

These results highlight that focusing on sensory pleasure can make children choose smaller portions size of palatable foods. The food sensory imagery intervention was especially effective at reducing the size of chosen portions among less hungry children. These results underscore the difficulty of relying on health arguments to motivate children to accept smaller snack portions. They also suggest that adults lose the ability that they had, as children, to forecast the effects of eating larger snack portions.

Using Coupons to Motivate Children to Purchase Healthy Snacks in Boston-Area Convenience Stores

EXTENDED ABSTRACT

Prior research has shown that the majority of foods purchased autonomously by children are energy-dense, nutrient-poor (EDNP) foods (Cash & McAlister, 2011; Dennisuk, et al., 2011; Engler-Stringer, Schaefer, & Ridalls, 2016; Jones et al., 2012; Lent, et al., 2015; Marshall, 2016; Sherman, et al., 2015). Few retail interventions focus on influencing the relative price of foods available to children. The primary aim of our research is to lead children away from EDNP foods and towards more healthful alternatives utilizing coupon discounts. This pilot study involved community partners and small stores in near Boston, Massachusetts.

The study involved three phases: 1) a formative research phase, 2) a baseline observation phase, and 3) the coupon intervention phase. The formative research phase involved a series of focus groups with children. Nineteen children, ages 9-15, participated in discussions about their snack food habits, shopping behaviors, and their understanding of coupons. We also pilot tested coupon designs during these sessions, and children were asked about the stores in which they shop. This helped us identify stores that might be appropriate sites for our coupon intervention.

For the observation and intervention phases, we worked with four convenience stores in the Boston area. At each of the four stores, store owners had agreed to cooperate with our research. These four stores were chosen on the basis of meeting three main criteria: 1) they were located in racially, ethnically, and economically diverse neighborhoods; 2) they were within walking distance of at least one school; and 3) they carried some products that would be considered healthy snacks (i.e., snacks that conform to USDA standards for acceptable snack items in schools, such as baked chips, whole fruit, nut mixes, etc.).

In the natural observation phase, research assistants surreptitiously recorded child purchases during before-school and after-school times. Research assistants were recording only observable data that included basic information about child shoppers (estimated grade level, gender, and whether the child was shopping alone/with a group) and their purchasing decisions (snack choice and total cost of purchase). These observations did not involve any interviews with children. The results of these observations provided baseline measurements and helped to determine which snack items were being purchased most often. Thus, they formed the foundation for the schedule of items to be discounted in the coupon intervention phase.

The coupon intervention was carried out in two rounds. In the first round, both the targeted "healthy" foods and the competing "unhealthy" foods were discounted. This first phase was relatively passive and simply involved placing coupons in the stores and monitoring sales numbers for various snack food items. In the second round, only the targeted "healthy" items were discounted and the promotion strategy was more aggressive (i.e., a character in a monkey suit approached children and pointed out the coupons). Each intervention round lasted approximately 9 months.

In each intervention round, coupons for the discounted item/amount for the week were placed on the shelf near the item and at the checkout counter. Discounts were offered on snacks that would likely be eaten in one sitting (i.e. one or two serving size quantity). Discount amounts were chosen on the basis of focus group findings and prior research (Cash & McAlister, 2011). Common discount amounts were $0.25 and $0.50. Occasionally, $1.00 discounts were also utilized.

Similar to the natural observation phase, the intervention phase involved research assistants surreptitiously recording children's purchases. For each purchase event, we recorded the child's estimated age range, gender, whether the child was shopping alone/with a group, whether the child paid for his/her own purchase or if another child paid, whether or not an adult was present, and whether or not an adult paid for the purchase. We also recorded all items purchased, amount paid, and whether or not a discount coupon was used.

After all intervention phases were completed, nutritional information was linked to each of the snack purchases based on the recorded brand, flavor, and package size. While drinks were not a priority for discounting in this study, the nutritional content of beverages was also included for each purchase event.

Across all stores, we recorded 2,970 purchase observations worth approximately $6,000 in total. Of the children observed, there was roughly an even gender split, and about 55% of the shoppers appeared to be in the 10-12 age range. Children purchased a range of items, but the majority of them were unhealthy snacks. Chips were the most popular, followed by candy and baked goods. The most popular snack categories held true regardless of coupon discount type.

Our results indicate that coupons may play a role in nudging children towards healthier snacking behavior. On average, children purchased slightly fewer items and spent significantly more money when targeted "healthy" items were discounted, as compared to days when there was either a competing "unhealthy" item discount or no discount. This suggests that coupons for "healthy" products may allow children to spend more on healthier snacks when the hurdle of high price is removed. Additionally, children were not compensating by using the coupon savings to purchase additional snack items (and may have actually been saving money).

A significantly greater number of targeted "healthy" items were purchased on days when these items were discounted. While sales of these items remain low, the result suggests that the use of coupons to discount healthier snacks may increase children's interest in buying those items. When "healthy" item coupons were available in the stores, the nutritional content of purchased items was significantly improved in most cases except for total calories, calories from saturated fat, calories from sugar, and calcium. Improvements in calories from total fat, fiber, and vitamin content may be driven by increases in fruit and vegetable snack purchases during targeted discount periods.

Children are Price Sensitive Too: Using Price Promotions to Increase Children's Choice of Healthy Food

EXTENDED ABSTRACT

Over the past three decades, the problem of overweight and obesity has gained much attention from policy makers, organizations, companies, and consumers (WHO 2005). The prevalence of infant, childhood and adolescent obesity is also rising around the world (de Onis, Blössner, & Borghi, 2010). Prior research has invested tremendous effort in testing the impact of marketing, such as food advertisements, on childhood obesity (Wright, Friestad, & Boush, 2005). However, attempts to restrict or ban advertisements of unhealthy products to children have not been proven successful (McGinnis, Gootman, & Kraak, 2006).

In this research, we aim to address the grave challenge of childhood obesity from a different angle—instead of banning or limiting marketing of unhealthy options to children, we leverage marketing tools to *encourage children's choice of healthy options*. We test the effectiveness of providing economic incentives, i.e., price promotions, to increase children's choice of healthy food. To do so, we give elementary school children coupons that present different economic incentives to purchase healthy food and measure the redemption rate of these coupons at schools' kiosks. Even though children have a good understanding of what money means starting at the age of three (Gasiorowska et al., 2016), it is unclear whether they would respond to economic incentives, i.e., price promotions, like adults do.

Importantly, during elementary school years, children go through significant cognitive developments that allow them to better comprehend concepts, make abstract connections, and do computations (John, 1999). Accordingly, we hypothesize that the complexity of the message the coupon entails will determine how effective these messages are and thus children's redemption rates across different age groups. We further predict that for younger children (ages 6-7), a simple (vs. complex) message of price promotion would be more effective, whereas for older children (ages 8-11), a complex (vs. simple) message of price promotion would conversely be more effective. In addition, as price promotions are often used repeatedly by marketers, we further test the effect of the coupons when distributed *again* after three weeks. Interestingly, we anticipate that during the second exposure, younger children might learn to appreciate the complex (vs. simple) message, making it the more fitting message and thus more effective. In contrast, for older children, both the simple and complex messages may become too easy and thus ineffective the second time around.

To examine these predictions, we collaborated with UNICEF to launch three field experiments at three elementary schools in Panamá. These studies were approved by the IRB in Panamá, as well as the Ministry of Education of the Republic of Panamá. In each study, we gave children coupons promoting healthy products they can redeem at their school's kiosk. Based on interviews with the local research teams and the schools' teachers, we selected a healthy product to promote at each school. The criteria for these products included having UNICEF's official approval as a healthy option for children, and being considered among the popular products that children purchase at their respective kiosks. In all schools, we first distributed the coupons on a Tuesday mid-June and then again on a Tuesday mid-July. Each time, children had three days to redeem the coupons. We tracked daily sales at the kiosk before, during, and after the coupon intervention.

To cleanly manipulate message complexity and avoid cross-condition comparison, for each school we assigned only one type of coupon to each class, and randomly assigned two types of coupons across classes within each grade. Specifically, in Study 1 (N=565), the simple message promoting cereal shake clearly stated the promoted price ("A cereal shake usually costs 1 dollar. Only Tuesday to Thursday! Pay only 80 cents when you buy the cereal shake!"), while the complex message only stated the discount value and would require computation to infer the price ("A cereal shake usually costs 1 dollar. Only Tuesday to Thursday! Pay 20 cents less when you buy the cereal shake!"). We first document that distributing the coupons increased sales for the cereal shake. More importantly, logistic regression with age (young vs. old), phase (time 1 vs. time 2), coupon type (simple vs. complex), and all interactions as the independent variables revealed the predicted three-way interaction on redemption rate (*Wald* = 17.191, $p < .001$). Simple effect analysis revealed that in phase 1, young children were more likely to redeem the simple coupon than the complex coupon, but the older children were more likely to redeem the complex coupon than the simple coupon. In phase 2, young children became more likely to redeem the complex coupon compared to simple coupon, whereas older children were equally unlikely to redeem the simple and complex coupons. In all

studies, analyzing the data at the grade level, instead of collapsing to two age groups, revealed similar results.

Study 2 (N=1219) used a similar complexity manipulation as Study 1, but promoted the natural fruit beverage at a different school for generalizability. Replicating Study 1, distributing the coupons had an immediate impact on sales. The logistic regression revealed again the hypothesized three-way interaction (Wald = 25.892, *p* < .001), and the predicted age differences from time 1 to time 2.

Study 3 (N=633) promoted the natural fruit beverage at yet another school, and used a different complexity manipulation: the simple message clearly stated the promoted price, whereas the complex message required children to make connections between two products of different sizes to infer the price. Replicating previous studies, distributing the coupons had an immediate impact on sales. The logistic regression revealed again the hypothesized three-way interaction (*Wald* = 31.464, *p* < .001), and the predicted age differences from time 1 to time 2.

Rather than preventing marketing to children altogether, we find that using age-appropriate incentive messages can prompt children to make healthier choices. Of note, our interventions are more subtle than explicit persuasion attempts that can potentially backfire (Maimaran & Fishbach, 2014; Robinson et al., 2007). Our findings have important theoretical implication for children's perception of value, and managerial implications to improve their health.

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Pain of Paying: Antecedents and Consequences

Chairs: Elizabeth M. S. Friedman, Columbia University, USA
Ryan Hauser, Yale University, USA

Paper #1: Paying Less for What You Value More: How Pain of Paying Leads to Preference Inconsistencies

Elizabeth M. S. Friedman, Columbia University, USA
Ryan Hauser, Yale University, USA
Ravi Dhar, Yale University, USA

Paper #2: The Perception, not the Payment: How Cognitive Appraisal Influences Pain of Paying

Justin Pomerance, University of Colorado Boulder, USA

Paper #3: More of the Same: Higher Pain of Payment Decreases Variety Seeking

Liang Huang, University of Arizona, USA
Rafay Siddiqui, The Hong Kong Polytechnic University, Hong Kong
Anastasiya Pocheptsova Ghosh, University of Arizona, USA

Paper #4: How the Pain of Payment Can Magnify and Mitigate Choice Overload Effects

Avni M. Shah, University of Toronto, Canada
James R. Bettman, Duke University, USA
John Payne, Duke University, USA

SESSION OVERVIEW

From a standard economic perspective, one should make a purchase if the benefit a good provides exceeds its cost. However, past literature has documented that pain of paying, or the negative affective response to parting with one's money, may interfere with this utility maximization. (Knutson at al. 2007; Prelec and Loewenstein 1998). To date, research in this area has primarily explored how the payment mechanism influences pain of paying. For example, people experience more pain paying with cash versus credit card (Raghubir and Srivastava 2008, Shah et al. 2015; Prelec and Simester 2001), after versus before consumption (Prelec and Loewenstein 1998), or per use versus as a lump sum (Soman and Gourville 2001). However, this session proposes that drivers of pain of paying are much richer than the payment mechanism. Further, pain of paying can have surprising and important effects on consumer preferences.

The current session seeks to address two fundamental questions: what factors, beyond payment mechanism, contribute to the pain of paying? What are potential downstream consequences on consumer choice? Using a broad range of methodologies including qualitative analysis and experimental design conducted in the lab, field, and online, these four papers cohesively explore the nuanced drivers of pain of paying, and their resulting effects on choice and consumer behavior.

The first two papers explore key drivers of pain of paying. In paper 1, Pomerance examines the impact of control on pain of paying. Interestingly, he finds that this sense of control is fundamental for decreasing pain of paying, even for irresponsible decisions. In paper 2, Friedman, Hauser and Dhar propose that goods may vary in how painful they are to purchase, independent of payment mechanism, and identify goods that are high in pain of paying.

We next explore the downstream consequences on preferences. Friedman et al. find that pain of paying can lead to preference inconsistencies, in which consumers are not willing to pay as much for high pain of paying goods that they otherwise like and value more. In paper 3, Huang, Siddiqui and Ghosh examine how pain of paying affects variety seeking. They demonstrate that higher pain of paying

increases consumer's need to justify their choices, leading them to seek less variety in favor of choosing their preferred options. Finally, in paper 4, Shah, Bettman and Payne explore how pain of paying can moderate choice overload effects. The authors show that when the pain of payment is reduced, consumers do not significantly decrease buying as the choice set increases, spend less time making a decision, and report higher satisfaction ratings.

Taken together, this session cohesively bridges research in consumer behavior, financial decision-making, and public policy to identify the underpinnings of pain of paying and how it affects consumer choice.

Paying Less for What You Value More: How Pain of Paying Leads to Preference Inconsistencies

EXTENDED ABSTRACT

Imagine waking up in a hotel room on a hot night feeling extremely thirsty. Although the minibar offers a cold bottle of water for $5, many people would not be willing to purchase it, even though the value of quenching their thirst in that moment may far outweigh the monetary cost. Furthermore, those same people may have readily spent $10 for a mediocre glass of wine that evening. While traditional economics suggests that consumers should purchase an item whose consumption utility exceeds its cost, people are often unwilling to pay for goods commensurate with value. In the scenario above, many people would prefer the water to the wine if both options were offered for free, but may be less likely to purchase the water due to the greater pain of paying for water than wine.

We empirically demonstrate that goods vary in their pain of paying, or the degree to which parting with money for the item causes a negative affective response. In contrast to prior research on the pain of paying, which has mainly focused on how the mode (e.g., cash versus credit card; Raghubir and Srivastava 2008, Shah et al. 2015; Prelec and Simester 2001), coupling (e.g., pay-per-use versus one-time cost; Soman and Gourville 2001), or timing of payment (e.g., before versus after consumption; Prelec and Loewenstein 1998) influence pain of paying, we explore how certain properties of the goods themselves and their typical purchase context can also affect pain of paying. We identify goods that people find particularly painful to purchase and explore the downstream consequences that this variation in pain of paying across goods may have on preferences: specifically, consumers may pay less for goods that offer more consumption utility.

We test our hypothesis by measuring preferences among pairs of goods that differ in their pain of paying (PoP). In study 1a, participants read that they checked into a hotel. Half chose whether they would prefer to have WiFi (high PoP) or breakfast (low PoP) included for free. Half indicated their WTP for each good, and we inferred preference based on the higher price listed. We consistently find that the high PoP good is relatively more preferred in free-choice than WTP ($P_{\text{WIFI-FREE-CHOICE}}=64\%$ vs. $P_{\text{WIFI-WTP}}=31\%$, $p<.001$).

We test this across a variety of goods, casting doubt on alternative explanations for the results. For instance, the pattern holds when market prices are specified (e.g., both the WiFi and breakfast typically cost $9.95; $P_{\text{WIFI-FREE-CHOICE}}=67\%$ vs. $P_{\text{WIFI-WTP}}=24\%$, $p<.001$), when the high PoP good is not typically offered for free (e.g., tank of gas vs. lunch for two, $P_{\text{GAS-FREE-CHOICE}}=64\%$ vs. $P_{\text{GAS-WTP}}=43\%$, $p=.004$), and

when the high PoP good is utilitarian rather than hedonic (O'Donnell and Evers 2018; e.g., parking vs. dessert at a restaurant, $P_{\text{PARKING-FREE-CHOICE}}$=79% vs. $P_{\text{PARKING-WTP}}$=59%, *p*=.003).

We test this across a variety of goods, casting doubt on alternative explanations. The pattern holds when market prices are specified, making a pure transaction-utility account unlikely (e.g., both goods typically cost $14.95; $P_{\text{WIFI-FREE-CHOICE}}$=67% vs. $P_{\text{WIFI-WTP}}$=24%, *p*<.001), as well as when the high PoP good is not typically free (e.g., printer ink vs. fragrance, $P_{\text{INK-FREE-CHOICE}}$=78% vs. $P_{\text{INK-WTP}}$=46%, *p*<.001), and when the high PoP good is utilitarian (O'Donnell and Evers 2018; e.g., parking vs. dessert, $P_{\text{PARKING-FREE-CHOICE}}$=79% vs. $P_{\text{PARKING-WTP}}$=59%, *p*=.003).

The subsequent studies compare choice when goods are free to when they both cost the same price, making explanations based on task mode unlikely. For instance, participants were less likely to buy gas over lunch when both cost $23.99 than when both were offered for free ($P_{\text{GAS-FREE}}$=66% vs. $P_{\text{GAS-MONEY}}$=51%, *p*=.030). Study 3 extends this result to a consequential choice. Participants in the lab had a 10-minute waiting period during which they could use their phone or get a snack. Attaching a price of $1 to the decision decreased the proportion of participants choosing to use their phone ($P_{\text{PHONE-FREE-CHOICE}}$=55% vs. $P_{\text{PHONE-PAID-CHOICE}}$=44%, *p*=.036).

Studies 4 and 5 explore the underlying process and moderators to this effect. If the difference in pain of paying across goods underlies the observed preference inconsistencies, reducing this difference should attenuate the inconsistency. Participants in study 4 chose between hotel WiFi and hotel breakfast. We varied whether they paid with their own money, with loyalty points (to reduce PoP) or for free. Paying with loyalty points increased choice of the hotel WiFi compared with paying with money ($P_{\text{WIFI-POINTS}}$ = 66% vs. $P_{\text{WIFI-MONEY}}$ = 33%, *p*<.001), bringing choice to the same level as free choice ($P_{\text{WIFI-FREE}}$=55%, *p*>.1). In support of our process, the difference in PoP between the WiFi and the breakfast when paying with money versus points mediated the effect on choice (95% CI[.41, 1.54]). In further support of this process, study 5 shows that preferences are inconsistent when goods differ in their pain of paying (e.g., a guacamole appetizer vs. parking; $P_{\text{GUACAMOLE-MONEY}}$=66% vs. $P_{\text{GUACAMOLE-FREE}}$=41%, *p*<.001) but are consistent when the goods are similar in their pain of paying (e.g., two appetizers – guacamole vs. spinach-artichoke dip; $P_{\text{GUACAMOLE-MONEY}}$=50% vs. $P_{\text{GUACAMOLE-FREE}}$=52%, *ns*; interaction: *p*<.001).

Taken together, we show that goods themselves vary in their pain of paying, and that this variation can lead consumers to pay less for goods that they otherwise prefer. Reducing the pain of paying, such as by paying with loyalty points, counteracts this preference inconsistency.

The Perception, not the Payment: How Cognitive Appraisal Influences Pain of Paying

EXTENDED ABSTRACT

After making a payment, consumers often (but do not always) attempt to reduce their subsequent spending. What determines the effect of spending on subsequent spending? Better understanding financial self-regulation (the process by which consumers adjust their financial decision making based on changes to their finances) is critical, as "either a sizeable minority or a slim majority of Americans are on thin ice financially" (Gabler 2016).

Emotions play a critical role in self-regulation generally, and they are well researched within financial decision making in the form of the pain of paying. While past work on pain of paying focuses on everything from payment-level factors that exacerbate the pain of paying (e.g. Raghubir and Srivastava 2008) to its downstream consequences (Shah et al. 2016), existing research has yet to ask how research on emotion might inform consumers' experience of the pain of paying. Perceptions of control are a major influence on emotion (Weiner 1980), yet the relationship between control and emotion is complicated (Thompson 1981). In this work we define control as "an individual's belief that he or she can personally predict, affect, and steer events in the present and future" (Kay et al. 2009). We predict that perceived control decreases pain of paying because control over one's finances decreases stress (Netemeyer et al. 2017), and because people may be motivated to perceive controlled payments as less painful in order to maintain positive views of themselves as consumers.

In study 1, we examine the proposed relationship absent overt manipulations of control. We ask online participants (n = 100) to look through their email receipts and/or their online bank statements to identify recent purchases. Participants listed four specific purchases, and answered questions about each purchase (perception of control over the purchase, the typicality/ predictability of the purchase, how expensive the purchase felt, the price, and the pain of paying. We find a negative relationship between perceived control and pain of paying (β = -.31, $t(382.43^1)$ = 4.83, *p* < .001). We note this result holds when controlling for the purchase's unpredictability, price, and subjective expensiveness (all *p*s < .002). Additionally participants felt that the majority of purchases (81%) were under their control. Given that perceptions of control might undermine the pain of paying, the possibility that people perceive most purchases as under their control suggests one reason that consumers have trouble with financial self-regulation.

Study 2 tests whether the negative effect of perceived control on pain of paying persists across typical and atypical purchases. Existing research argues that "novelty detection… can be considered as a gateway to the emotion system" (Ellsworth and Scherer 2003). This suggests that highly typical payments may be less painful, and that the effect of control may be moderated by typicality, as consumers simply attend less to more typical stimuli, diminishing any perception-based effects. Participants (n = 200) imagined going out for dinner and a show with friends in one of four conditions (control: high/low; typicality: high/low). High control participants imagined deciding on what to order themselves, as opposed to ordering as a group. Typicality was manipulated by the items ordered and the supposed regularity with which people went out for dinner with friends (Sussman and Alter 2012) with many of the largest expenses (e.g., electronics, celebrations). We find a negative main effect of control (β = -.48, *t*(262.63) = 3.68, *p* < .001), but no main effect of typicality (β = -.03, *t*(284.46) = .23, *p* = .82). Further, we find a significant interaction (β = .59, *t*(304.88) = 2.08, *p* = .038) such that control decreases pain among atypical stimuli (β = .18, *t*(290.34) = .95, *p* = .343), but has no effect on pain among typical stimuli (β = .78, *t*(280.39) = 4.04, *p* < .001).

Given the complex relationship between perceived control and emotion, in study 3 we ask whether control might *increase* pain of paying under certain circumstances. Specifically, we investigate whether control might force people to internalize blame after making an irresponsible purchase, thereby increasing pain. Three studies (total n = 999) adapt the paradigm in study 2, and test for an interaction between perceptions of control and whether the purchase is relatively responsible (allowing consumers to "take the credit," decreasing pain) or relatively irresponsible (forcing consumers to "take the

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1   Fractional degrees of freedom come from Satterthwaite estimates in linear mixed effects models (Kuznetsova, Brockhoff, and Christensen 2017).

blame," increasing pain). All three studies utilize a 2 (control: high/low) by 2 (responsibility: high/low) factorial design using vignettes in which participants imagine going out for a night with friends. We collapse the three studies into an internal meta-analysis here for brevity and power. Combining the data, we predict pain of paying from control (high versus low), responsibility of the purchase (high versus low), their interaction, a random intercept for each study, and a random intercept by participant (one study involved two within-subject sub-scenarios). While we again find that control decreases pain of paying (β = -.21, $t(964.14)$ = 2.17, p = .030), we notably do *not* find that the effect of control depends upon whether people view the spending scenario as responsible or irresponsible (β = -.11, $t(943.04)$ = .59, p = .56).

In this research, we ask how perceptions of control over a purchase influence pain of paying. It is well known that control influences emotion, and that the relationship between control and emotion is multifaceted and complex. We find that perceived control decreases pain of paying, even in scenarios where it might be expected to do the opposite. Future work will ask whether perceiving control allows purchases to "fly under the radar," preventing people from adjusting their spending due to its negative effects on the pain of paying.

More of the Same: Higher Pain of Payment Decreases Variety Seeking

EXTENDED ABSTRACT

Retailers offer an increasing number of payment methods to consumers to complete their purchases. The use of different payment methods influences consumers' experienced pain of payment, the psychological discomfort of parting with money (Prelec and Loewenstein 1998). Past work shows that pain of payment can affect the quantity (Monger and Feinberg 1997; Raghubir and Srivastava 2008) and type of products purchased (Soman 2003; Thomas et al. 2011). We extend this line of work by demonstrating how pain of payment affects consumer choices when they buy multiple items within a product category, while keeping the total number of products purchased and amount spent constant.

We argue that using a more painful payment method increases consumers' need to justify their choices and affects the amount of variety chosen. Supporting this view, prior work demonstrates that consumers who experience higher pain of payment are more likely to purchase from product categories that are easier to justify, such as essential products (Soman 2003), and avoid product categories that are harder to justify, such as vice products (Thomas et al. 2011). We argue that, in the context of choosing multiple items within one product category, one's favorite items are easier to justify than one's less-preferred items, as consuming less-preferred items increases post-purchase regret (Ariely and Levav 2000; Ratner, Kahn, and Kahneman 1999). Consequently, we propose that, when consumers experience high (vs. low) pain of payment, they are more likely to choose their favorite items and avoid less-preferred ones, thereby demonstrating lower variety seeking.

We find support for our argument in five studies. In a pilot study (N = 180) we first demonstrate that favorites are easier to justify in a multiple choice context, where consumers often over-predict satiation from repeating favorites (Galak et al. 2011). Participants imagined purchasing five tubs of ice cream using either cash or loyalty points. They saw five different flavors and were told that they can either choose five tubs of their favorite flavor (i.e., low variety seeking) or choose one tub of each of the five flavors (i.e., high variety seeking). We measured participants' perceived ease of justification for the two options and predicted satiation rate. Participants antici-

pated a faster satiation rate when eating five tubs of their favorite flavor rather than five different flavors ($M_{favorite}$ = 3.86, $M_{variety}$ = 3.09, $F(178)$ = 20.06, p < .001). Importantly, however, participants found it easier to justify choosing only their favorite flavor than choosing different flavors ($M_{favorite}$ = 5.43, $M_{variety}$ = 4.91, $F(178)$ = 6.58, p = .011).

In Study 1 (N = 108) we demonstrate in a real purchase setting that higher pain of payment decreases variety seeking. We manipulated pain of payment by giving participants either two dollars in cash or in coupons to make a purchase (Shah et al. 2016). Participants purchased five energy drink powders from five flavors. Consistent with our predictions, participants who paid with cash chose a significantly lower variety of flavors than participants who used coupons ($M_{Highpain}$ = 2.71, $M_{Lowpain}$ = 3.15, $t(106)$ = 2.25, p = .026).

Studies 2 and 3 test the need for justification as the underlying process. In Study 2 (N =206), participants imagined paying with cash or loyalty points and rated their need to justify choices before making a purchase. We find that participants who paid with cash (vs. loyalty points) felt higher pain of payment (M_{cash} = 3.20 M_{points} = 2.31, $t(204)$ = 3.62, p < .001), and a higher need for justification (M_{cash} = 4.83, M_{points} = 4.34, $t(204)$ = 2.07, p = .04). A bootstrap analysis confirmed that the effect of payment method on the need for justification was mediated by pain of payment (indirect effect) (β= .17, 95% CI (.08, .30)).

In study 3 (N = 301), in a real choice setting similar to study 1, we show that participants who pay with cash (versus coupons) choose fewer flavors of tea (M_{cash} = 2.75, M_{coupon} = 3.14; $F(1,298)$ = 5.912, p = .016), and this decrease in variety seeking is mediated by a greater need to justify their choices (β= -.041, 95% CI (-.137, -.0001)).

An important assumption behind our predictions is that the choice set includes consumers' favorites as well as options that are preferred less, allowing consumers to justify their choices by sticking to their favorites. By contrast, when consumers have weak preferences among the choice options and thus no favorites, pain of payment should not affect variety seeking. In the final study (N= 602) we manipulated pain of payment as in study 2, and asked participants to choose products from three product categories. We measured participants' strength of preference between the options in each category. We conducted a mediated moderation analysis for each product category using payment method as the independent variable, pain of payment as the mediator, participants' preference strength among the product options as the moderator, and variety of products chosen as the dependent variable. The results revealed a significant mediated moderation for each product category (Diet Coke: β= .102, 95% CI (.019, .189); Yogurt: β= .128, 95% CI (.057, .224); Instant Food: β= .084, 95% CI (.031, .148)), indicating that high pain of payment led to less variety seeking, when preference strength among the available options was relatively strong, and this effect was attenuated when consumers had weaker preferences among the available options.

Our theoretical contribution is within the literature on pain of payment. Past work has shown payment methods to affect the quantities (Monger and Feinberg 1997; Raghubir and Srivastava 2008) and type of products purchased (Soman 2003; Thomas et al. 2011). We make an important extension to these findings by showing how payment methods affect the variety of products purchased, while keeping the quantity, amount spent, and type of products constant. Our findings also have significant practical implications. We provide managers with a novel tool for managing demand, as they can increase sales of neglected products by decreasing pain of payment, or promote painful payment methods in order to entice consumers to stick to their favorite brands.

How the Pain of Payment Can Magnify and Mitigate Choice Overload Effects

EXTENDED ABSTRACT

There is no denying that consumers today have more products to choose from than ever before. At the same time, the way that individuals pay for purchases has also dramatically shifted with more and more transactions being paid for via credit/debit card or mobile payment (Greene and Schuh, 2017). Thus, while individuals are faced with choosing from a greater product assortment, which can be a potentially difficulty and burdensome task, the process of spending has become more convenient and painless than ever before. In this paper, we ask whether the anticipated pain of payment associated with making a purchase from a choice set can affect the likelihood that consumers will experience choice overload effects (i.e., purchase likelihood, decision effort, decision difficulty, post-purchase satisfaction). Across field and lab experiments, we find reducing the anticipated pain of payment—either through paying by 'plastic' or by paying less for an item—can serve as a cue to consumers to reduce the likelihood of individuals engaging in a maximization process in order to find the best alternative and instead leads to individuals taking a more satisficing approach. This in turn leads to increased purchasing in larger choice sets, spending less time on the decision, and higher post-purchase satisfaction ratings.

In the first two field experiments, passersby were invited to purchase a black pen for $1 from a set of alternatives, either being told that they had to purchase using cash (a more painful method of purchase) or 'plastic'. Experiment 1(N=200) had a 2 (payment form: cash, student plastic card) X 5 (number of alternatives: 2, 6, 10, 14, 18) between-subjects design. In contrast to Experiment 2, we allowed consumers to purchase as many pens as they wanted. While, there was no difference in buying likelihood in the three smaller-choice conditions between payment method, plastic-paying consumers were significantly more likely to make a purchase than cash-paying consumers in the larger choice conditions (14- and 18-choice sets). Plastic-paying individuals also bought more than one pen more frequently. Thus, in Experiment 2, we used a similar between-subjects design but restricted buying to just one pen. This restriction helped determine whether plastic-paying consumers were less susceptible to choice overload perhaps because they chose to reduce choice conflict/decision-difficulty by buying any pen that met their needs or due to the moderating effect of a less painful payment method on buying in larger choice sets. However, despite restricting individuals to just one pen, paying with plastic still led to significantly more buying in larger choice sets in comparison to when individuals paid with cash. There was no difference in small or medium choice buckets though (2- or 6-choice condition; 10-choice). Thus, once again, there was a significant interaction between payment mode and the quadratic-function of the number of alternatives.

Experiment 3 sought to answer two questions: 1) Is it indeed the pain of payment that drives differences in buying in larger choice sets and 2) From a retailer perspective (and building off previous work that shows that categorization can also moderate choice overload effects, Kahn and Wansink 2004), can the way that a larger assortment is organized/categorized influence whether payment mode always predicts greater buying in larger choice sets? Experiment 3 used a 2 (payment form: cash or plastic) X 3 (assortment structure: one-color category, two-color categories, four-color categories) between-subjects design. All participants (N=120) were given a chance to purchase one pen from a set of sixteen options for $1.00 using their own money. In the one category condition, participants were given sixteen black pens to choose between In the two-category con-

dition, the sixteen pens were organized into two-color groups containing eight black pens and eight blue pens. In the four-category condition, the sixteen pens were divided into four black/blue/green/purple color categories. After individuals made the choice whether to buy or not, they were asked follow-up questions, including how painful it was to pay $1 for the pen (adapted from Shah et al. 2016; 1-7 Likert scale: 1= Not at all painful, 7=Very Painful)? First, we found that there was no significant difference in buying as a function of payment method, when the sixteen pens were broken into two groups of eight black and blue pens each (akin to a medium size choice bucket) or four groups with four pen choices per color (akin to a small choice bucket). However, plastic-paying consumers did in fact buy more than cash-paying consumers when the sixteen pens were all black (akin to a large assortment). In addition, we found that pain of payment significantly mediated the relationship between payment form and buying in this larger assortment condition.

Experiment 4 and 5 tested the process driving these effects more deeply. In Experiment 4, we examined whether reducing the pain of payment through lowering the cost of a given item would moderate the choice overload effect using a 2 (mode of payment: cash, student 'plastic' card) X 3 (number of alternatives: 4, 10, 16) X 3 (price per pen: $0.25, $1.00, $2.00) between-subjects design. Regardless of payment method, reducing the price of the pen to $0.25 led to increased buying at larger choice sets, while increasing the price of the pen to $2.00 led to decreased buying. In addition, increasing the price led to a maximization process whereby individuals spent more time on the decision, tried more alternatives, and reported lower satisfaction post-purchase. A follow-up online experiment (N=400) was consistent with this maximization theory as paying with cash (versus Venmo) led to a significantly increased desire to want to search to find the best alternative.

This work contributes by better understanding factors influencing the choice overload paradigm. An increasing choice set size alone may not always produce choice overload effects but rather may be due in part to an interaction between the size of the choice set *and* the (anticipated) pain of payment when purchasing. Thus, pain of payment may serve as a cue of how much one should search or engage in a maximization in order to find the right alternative.

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Prosocial Consumption and Contribution: The Impact of Firm's Actions, Donor's Actions, the Nature, and the Machines

Chairs: Szu-chi Huang, Stanford University, USA
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Paper #1: Risky Business: The Risk-Reward Trade-off is Different for Nonprofit and For-Profit Firms

Rachel Gershon, University of California, San Diego, USA
Cynthia Cryder, Washington University in St. Louis, USA
Merriah Croston, Washington University in St. Louis, USA

Paper #2: Increasing Donor Retention with Feedback on Donation Use

Edlira Shehu, Copenhagen Business School, Denmark
Michel Clement, University of Hamburg, Germany
Karen Page Winterich, Pennsylvania State University, USA
Besarta Veseli, University of Hamburg, Germany

Paper #3: The Transcendent Self: The Influence of Exposure to Nature on Self-Serving Versus Prosocial Consumption

Noah Castelo, Columbia University, USA
Miranda Goode, Western University, Canada
Katherine White, University of British Columbia, Canada

Paper #4: When Robots Come to Our Rescue: Why Professional Service Robots Aren't Inspiring and Can Demotivate Consumers' Prosocial Behaviors

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SESSION OVERVIEW

Prosocial behaviors are behaviors that involve self-sacrifice for the good of others or of society (Small and Cryder 2016). Consumers often engage in prosocial behaviors such as donating to nonprofits organizations, purchasing environmentally-friendly products, and supporting cause-related marketing. Decades of work has studied what motivates consumers to behave pro-socially (Batson et al. 2007). Critical antecedents for encouraging prosocial consumption and contribution include firm's actions, donor's perceptions, and situational influences (e.g., Cryder, Botti, and Simonyan 2017; Darley and Latane 1968; Gneezy, Keenan, and Gneezy 2014). This session brings together papers that explore novel influencers of consumers' prosocial behaviors from four distinct angles: (1) firm's risky action, (2) donor's past action, (3) the environment/nature, and (4) the machine/robot.

First, how does *risk-taking by nonprofit organizations* influence consumers' willingness to support the organization? The paper by Gershon, Cryder, and Croston demonstrates that consumers are less tolerant of risk-taking by nonprofits: when a nonprofit organization chose a high risk and high expected value (vs. a safe but low expected value) fundraising option, consumers were less likely to support the nonprofit organization, because risk-taking activates paternalistic attitudes toward the firm. Interestingly, consumers do not penalize for- profit firms to the same degree for choosing the same risk, underscoring the uniqueness of prosocial industries. What can nonprofit organizations do to increase redonation? The second paper by Shehu, Clement, Winterich, and Veseli demonstrates in two field experiments and two controlled studies that giving donors feedback on their *past donation use* helps to convey service value, and significantly increases the number of redonation (i.e., donor retention).

Going beyond firm's and donor's action, how does our environment—*the exposure to nature*—affect prosocial consumption? The

third paper by Castelo, Goode, and White shows that immersed in nature leads to self-transcendence (i.e., a sense of being connected to something greater than oneself), which decreases self-prioritization and increases prosocial consumption, e.g., choices of environmentally-friendly products. Contrasting the impact of nature on prosocial behavior, the last paper explores what happens when *new technology— professional service robots*—are used in prosocial missions. Huang and Chen show that consumers in general feel less inspired when they read about a robot (vs. a fellow human) carrying out a prosocial/disaster-relief act, because of the perceived lack of autonomy in robots. They document how this feeling of lower inspiration spills over to reduce consumers' prosocial contribution for unrelated causes through two field experiments, and identify multiple ways to circumvent this negative effect (e.g., altering the description of robots' relationship with human volunteers).

Taken together, this special session examines four critical influencers of consumers' prosocial consumption and contribution. We study a diverse set of behaviors (donor retention, support, donation amount, and donation quantity) in the lab and the field, as well as novel mechanisms from firm perception, service value, to subjective experience such as inspiration and self-transcendence, ensuring a broad appeal for scholars and practitioners across disciplines (marketing strategy, feedback, information processing, risk, affect, self-view, motivation, decision making) and a lively discussion to encourage future research in these areas.

Risky Business: The Risk-Reward Trade-off is different for Nonprofit and For-Profit Firms

EXTENDED ABSTRACT

Consumers hold different attitudes toward nonprofit and for-profit firms. For example, consumers perceive nonprofits as warmer than for-profits, but also as less competent (Aaker, Vohs, and Mogilner 2010). Similarly, consumers believe that nonprofit hospitals are more trustworthy and humane, but also lower in quality than for-profit hospitals (Schlesinger, Mitchell, and Gray 2003). This paper investigates a novel and important difference in how consumers judge nonprofit versus for-profit firms: consumers feel paternalism toward non- profit organizations, making them judge risk-taking by nonprofits less favorably than identical risk-taking by for-profit organizations.

Five experiments find that consumers penalize a nonprofit that chooses a risky (but high expected value) option over a certain (but low expected value) option, however, they do not penalize a for-profit company to the same degree for choosing the same risk. This effect is due to the perception that nonprofits are low in agency, therefore, when nonprofits take an agentic action such as risk-taking, it evokes paternalistic attitudes and decreases consumer support.

Experiment 1 was an initial test of reactions to nonprofit risk-taking using a 2 (nonprofit/for-profit) × 2 (safe/risky) between-subjects design. In the nonprofit condition, participants read, "You regularly donate to a nonprofit called CleanWater, which provides clean, safe water to people all over the world." Those in the for-profit condition read, "You regularly buy bottled water from a company called CleanWater." Participants then read, "Recently, the [nonprofit/company] was deciding between two [fundraising/business]

ventures, Choice 1: [Raise/Earn] $200,000 for sure and Choice 2: 50% chance the [nonprofit/company] will [raise/earn] $1 Million and 50% chance the [nonprofit/company] will [raise/earn] $0". Participants were informed that the [nonprofit/company] chose either the safe (but low expected value) or the risky (but high expected value) option. We measured participants' likelihood of supporting the organization in the future. Results showed a significant interaction between firm type and risk-taking ($F(1, 301) = 12.93$, $p < .001$).

Despite the much higher expected value for the risky choice ($500,000 vs. $200,000), consumers showed a general decreased willingness to support firms that take risks; most importantly, this decrease was significantly and substantially greater for the nonprofit organization. (Note: A follow-up study replicated this result while using purchase intentions as the DV for both the for-profit and non-profit).

In Experiment 2, participants imagined that they were the head of a large [nonprofit/company] and that they must decide which venture to pursue. Participants then selected either a 1) safe, but low expected value choice (raise $200,000 for sure) or 2) risky, but high expected value choice (50% chance at $1 million, 50% chance at $0). When asked to imagine that they were the head of a nonprofit (vs. for-profit), participants' choice of the risky, but higher payoff venture decreased from 43.5% to 24.1% ($\chi(1) = 8.43$, $p = .004$). In other words, participants were significantly more risk-averse when acting as if they were responsible for a nonprofit compared to a for profit firm.

Experiments 3A and 3B use the same design as Experiment 1 (though with a binary yes/no choice to support as the DV) and rule out possible alternative explanations for consumer risk-intolerance for nonprofit organizations. It is possible that consumers choose not to support nonprofits that take risks because they take particular issue with their own donation going towards a risky investment rather than towards the nonprofit's programming (see Gneezy, Keenan, and Gneezy 2014). We therefore tested two scenarios examining the nonprofit risk-choice. In Experiment 3A, we used a 2 (nonprofit choice: safe/risky) × 2 (control/no-overhead) between-subjects design and explained to participants in the no- overhead condition that their donation would go directly to programming and not to the (risky or safe) fundraiser. In Experiment 3B, we used a 2 (nonprofit choice: safe/risky) × 2 (self- donation/other-donation) between-subjects design in which participants either made the choice to donate themselves (self-donation) or advised an anonymous individual on whether to donate to the nonprofit (other-donation; see Cryder, Botti, and Simonyan 2017). In both experiments, we found a main effect of nonprofit risk, such that participants were less likely to donate (or advise others to donate) to the risk-taking nonprofit. However, we found non- significant interactions of risk-taking and the donation treatment for both studies (ps. > .20). These patterns indicate that the intolerance for risk-taking is not due to donor preferences that their own donation will not go towards a risky venture; the phenomenon persists even when participants are informed that their donation will go directly towards programming.

Experiment 4 explored process using the same design as Experiment 1 with an even higher expected value for the risky choice (safe=raise $200,000 for sure vs. risky=50% chance at $5 million, 50% chance at $0). To measure paternalistic attitudes, we collected responses to the following items: "CleanWater deserves to spend their money as they choose", "CleanWater has the right to make their own spending choices," and "How CleanWater spends their money is up to them," 1=Definitely Disagree, 7=Definitely Agree (adapted from Olson, McFerran, Morales, and Dahl 2016). We also measured perceptions of warmth, competence, and morality. Results replicated the interaction from Experiments 1-3B of firm type and risk-taking on consumers choice to support the organization (Waldχ^2 (1) = 9.05, $p = .003$). In addition, judgments of paternalism mediated this interaction, such that participants rated a greater increase in paternalistic attitudes for the nonprofit (vs. for-profit) when they chose the risky option and this led to a greater decrease in support for the nonprofit. Further, in a test of parallel mediation, paternalistic attitudes, but not the other process items (warmth, competence, and morality) still significantly mediated the interaction.

Consumers are less tolerant of risk-taking by nonprofits than for-profits. Specifically, when nonprofits make highly agentic choices (such as taking risks), this evokes paternalistic attitudes that decrease resource allocation to the firm. Such penalties have the potential to compromise the level of innovation that nonprofits can pursue while pursuing successful fundraising campaigns.

Increasing Donor Retention with Feedback on Donation Use

EXTENDED ABSTRACT

Non-profit organizations (NPOs) face an increasing level of competition and struggle to retain donors (Kessler and Milkman 2018; Khodakarami, Petersen, and Venkatesan 2015; Ryzhov, Han, and Bradic 2016). For example, nearly a quarter of blood donors are not retained as 24.9 percent of registered blood donors in the Netherlands do not provide a second donation and statistics from the United Kingdom and United States are similar (van Dongen 2015).

Despite the high managerial relevance, many NPOs struggle to identify effective donor retention strategies. Commercial companies often rely on monetary incentives to drive repeat purchase (Datta, Foubert, and Van Heerde 2015; del Rio Olivares et al. 2018). However, NPOs do not tend to benefit from using monetary incentives because they can crowd out intrinsic motives (Benabou and Tirole 2006; Heyman and Ariely 2004). In addition, monetary incentives may dampen attitudes toward the NPO due to perceptions regarding ineffective use of funds (Gordon, Knock, and Neely 2009; Winterich and Barone 2011).

In this research, we propose and test a donor retention strategy that utilizes existing donation use information rather than relying on monetary or other extrinsic incentives.

Building on value co-creation research, we argue that giving donors feedback on their past donation use increases the perceived warm glow and value donors receive from the NPO (Vargo and Lusch 2016, 2008; McGrath 1997).

We test this retention strategy in the context of blood donation by informing donors in two field studies (N=28,222 active donors in Study 1 and N=11,166 inactive donors in Study 2) that their blood donation was used in a hospital on a certain date. These field studies compare the effectiveness of our proposed retention strategy to a best-practice appeal that merely acknowledges past donations. The results show that incorporating past donation use increases the probability to reactivate inactive donors by 11.98%, and the number of donations of active donors by 9.8% yearly. Using conservative estimates of one annual donation on average, this translates into an additional 14 donations per 1000 contacted inactive donors, and 98 donations per 1000 contacted active donors. For large organizations with a donor base of several hundreds of thousands, the effect is substantial as each blood donation may serve up to three persons.

Two subsequent controlled experiments replicate this retention effect and offer insight for the effectiveness of this appeal. Study 3 uses a one-factor, two-level between-subjects design, where re-

spondents are randomly assigned to either a past donation use or a control acknowledgment condition. Donation intentions (measured on a 7-point scale) are higher for the past donation use condition (M = 4.41, SD = 2.25) compared to the control group (M = 3.79, SD = 2.34; t(224) = 2.05, p = .04). The past donation use effect is transmitted through warm glow (M = 5.02, SD = 1.58 in the past donation use versus M = 4.67, SD = 1.67; t(224)

= 2.45, p = .02), and we rule out a potential mediation through victim identification. In Study 4, we show that the past donation use effect on donation intentions is transmitted through a serial mediation via warm glow and service value.

Our findings are relevant for managers and researchers alike. Our proposed strategy, which informs donors of their past donation use, can generally be easily implemented by NPOs. In fact, blood donation services in Sweden, Australia, and other countries adopted related strategies informing current donors how their latest donation is used (Stone 2015). However, the effect of this retention strategy relative to traditional donation acknowledgment strategies has not been quantified to date.

Referring to academic areas, we have three core contributions. First, our work contributes to the literature on donor retention, adding to both the nonprofit and relationship management literature. In the relationship management literature, retention can often be increased via monetary incentives (e.g., del Rio Olivares et al. 2018), which may backfire in the prosocial context (Heyman and Ariely 2004). By proposing a retention strategy that does not rely on incentives, we demonstrate a managerially relevant and cost-efficient approach to managing relationships in the nonprofit sector. In doing so, we add to recent research which shows how personalizing donation appeals by incorporating information on past donation amount or date affects redonation (e.g., Kessler and Milkman 2018; Ryzhov, Han, and Bradic 2016). We move beyond past donation amount and date and show how information on past donation use, a key piece of information relevant to existing donors' perceptions of the NPOs service value (Sargeant 2001), increases retention.

Second, this study also adds to the literature on service value, which has not received much consideration for nonprofits (Vargo and Lusch 2008). According to McGrath (1997), nonprofit service value is what a NPO specifically does for its donors, such as appreciation and feedback. To date, research has considered the central role of service value for nonprofits from a theoretical perspective (McGrath 1997), but empirical insights are lacking. The current research addresses this gap, showing that service value plays a key role when it comes to donor retention. Nonprofits can increase the number of donors they retain by sharing past donation use information and increasing the salience of their NPOs value creation (Vargo and Lusch 2016).

Third, we show that it is not sufficient to merely acknowledge past donations; NPOs need to incorporate past donation use information in their redonation appeals to enhance their value to donors and thereby retain more donors. Thus, our findings also contribute to the literature on recognition in prosocial behavior (Winterich, Mittal, and Aquino 2013) by demonstrating that, in the redonation context, appeals pertaining to donation use are more effective than donation acknowledgement alone.

Moreover, the societal impact of successfully improving retention of blood donors is high, as the GRC notes that one blood donation can save the lives of up to three people. Thus, improving donor retention may save lives – especially for those blood types that are rare and especially in need during times of supply shortages.

The Transcendent Self: The Influence of Exposure to Nature on Self-Serving Versus Prosocial Consumption

EXTENDED ABSTRACT

We propose that exposure to nature can decrease interest in self-centered, material things and, instead, make people more other-focused and prosocial in their consumption behaviors. Past research has shown that exposure to nature has many beneficial consequences such as stress reduction (Ulrich et al. 1991), improved mood (Abraham et al. 2010), enhanced concentration (Hartig et al. 2003), and heightened attention (Berman, Jonides, and Kaplan 2008). We build on this work to propose that exposure to nature can also enhance feelings of self-transcendence—a sense of being connected to something greater than oneself. We further propose that this sense of self-transcendence subsequently decreases self-prioritization and increases prosocial behaviors.

Qualitative consumer research has explored the role of cultural narratives portraying nature as a powerful, sacred, and even divine entity, in reducing perceived barriers between oneself and the environment (Arnould and Price 1993; Canniford and Shankar 2013). In our context, we propose that exposure to nature (vs. a control) will lead to the broader sense that all of life, including but not limited to other human beings, share a common bond, are interconnected, and are part of a greater whole. This, in turn, is predicted to increase prosocial behaviors such as choosing products with ethical attributes, donating to charity rather than gaining benefits for the self, and making decisions that favor the social good over individual profit.

Study 1 asked 90 undergraduates to walk either through a natural landscape or through a more urban landscape, before measuring their state materialism (3 items; e.g., "material things are important to me"). Compared to walking in an urban area, participants who walked in nature reported lower materialism (Mnature = 4.88 vs. Murban = 5.41, t(88) = 2.26, p = .026).

Studies 2A and 2B used a recall-based manipulation in which participants wrote about a prior experience of being in nature, or about a neutral topic. In 2A, 200 MTurk participants completed an ad evaluation task in which they saw two ads for a granola bar. One ad emphasized the product's prosocial benefits ("good for you and the environment") and the other ad emphasized self-serving benefits ("a healthy, tasty snack"). Participants in the nature condition were more likely to prefer the option that emphasized prosocial benefits (66%) than those in the control condition (45%; $\chi^2(1)$ = 8.10, p = .0004).

In Study 2B, 316 MTurk participants completed the same manipulation and a measure of selftranscendence (3items, e.g., "I feel that on a higher level all of us share a common bond," "All life is interconnected," Levenson et al. 2005). Participants then read a short scenario asking them to play the role of the CEO of a fishing company, whom the government had asked to reduce his fish harvest (and profits) to benefit future generations.

Participants indicated how much fish they would harvest, a measure of willingness to forego immediate selfbenefits to benefit the social good (WadeBenzoni et al. 2008). Those in the nature condition reported increased feelings of selftranscendence (Mnature = 8.95) compared to the control condition (Mneutral = 8.63, t(306) = 3.01, p = .002). Furthermore, they also reported a greater willingness to harvest less fish now in order to benefit future generations (Mnature = 582.9 vs. Mneutral = 623.6, t(306) = 2.47, p = .042).

Study 3 was a field study in which 72 participants were asked to complete a short study either before (prenatureexposure) or after (postnatureexposure) they left a hiking trail. As our primary dependent variable, we offered participants the choice between entering a draw for a selfbenefit (i.e., winning an iPad as a prize) or forgoing

the draw entry to donate to the United Way. We also measured self-transcendence as in Study 1B. Participants were significantly more likely to choose the prosocial option over the selffocused option if they made their decision after (68%) versus before nature exposure (32%, $\chi^2(1) = 8.16$, $p = .009$). Transcendence mediated the effect of the hiking manipulation on the prosocial choice ($\beta = . 33$, 95% CI $= .02–1.1$).

Study 4 demonstrates a boundary condition of the effects of nature on prosocial behavior. Specifically, because we theorize that the effects are driven by selftranscendence, the effect should be less likely to occur in contexts that make consumers feel separate and distinct from others. A research assistant approached 142 participants either before or after they completed a hike, as in Study 2. Participants were assigned to one of two additional conditions, in which they either wrote about "a time when [they] felt distinct and separate from others and the world around [them]," or did not complete any writing task. The design was therefore a 2 (nature exposure: pre vs. post-nature exposure) x 2 (selffocus: high vs. neutral). The DV was the choice of donation vs. iPad draw, as in Study 2. A logistic regression revealed a main effect of nature exposure (pre = 0, post = 1; $\beta = 1.25$, $p = .021$) and a significant interaction between the two independent variables ($\beta = 1.50$, $p = .041$).

Participants who did not engage in the selffocus task were more likely choose the donation after (83.3%) than before nature exposure (58.8%; $\chi^2(1) = 4.48$, $p = .034$). When participants wrote about a time they felt separate from others, they were equally likely to donate regardless of nature exposure (after = 54.5%; before = 60.6%, $\chi^2(1) = .06$, $p = .803$).

A sense of feeling connected to something bigger than oneself while being immersed in nature is an intuitively appealing phenomenon. These results lend empirical support to this notion, showing that this sense of selftranscendence can occur as a result of directly experiencing or even just remembering exposure to nature. Furthermore, selftranscendence in turn increases consumers' focus on others relative to themselves, thereby increasing prosocial behavior. These findings contribute to the literatures on selfconcept, prosocial behavior, the effects of spending time in nature. They also suggest a potentially useful marketing tool for charities and nonprofits, who may benefit from naturebased imagery and messaging in their advertising campaigns.

When Robots Come to Our Rescue: Why Professional Service Robots Aren't Inspiring and Can Demotivate Consumers' Prosocial Behaviors

EXTENDED ABSTRACT

Service robots refer to robots that perform services useful to the well-being of humans or equipment (ISO 8373:2012). With rapid advances in technology, the use of professional service robots in prosocial missions, such as disaster search, rescue and recovery, is becoming prevalent around the world, along with the growing news coverage of these prosocial missions (Bartneck and Forlizzi 2004; Liu and Nejat 2013; Murphy 2004). This research examines how consumers feel and react when they read about a robot carrying out a disaster relief mission that is usually performed by humans.

We propose that observing a robot conduct a disaster relief act is less inspiring to consumers than observing the same act carried out by a fellow human (H1). This lowered feeling of inspiration results from the perceived lack of autonomy in robots' participation in the prosocial mission (i.e., the lack of ability to control over their own behaviors and act independently; Bartneck and Forlizzi 2004; Ryan and Deci 2000; Hoffman and Novak 2017). Consequently, when a robots' autonomy is externally enhanced, the negative effect on inspiration can be mitigated (H2). More importantly, a lower feeling of inspiration will lead to a lower likelihood for consumers to support prosocial causes in subsequent, unrelated domains (H3).

Six studies provided supportive evidence for our hypotheses. Study 1 tested H1 through a 2-condition (rescue agent: robot vs. human) between-subjects design. Participants first read about a fictitious news report about a sudden earthquake in a small US town. Then, those in the robot (human) condition read that a robot (human) disaster response team had been sent to rescue survivors from the earthquake. We measured the extent to which participants felt inspired using scales adapted from Thrash and Elliot (2004). As predicted, participants reported a lower level of inspiration when they read about robots assist in the earthquake rescue compared to reading about fellow humans conducting the same act.

Studies 2-4 tested whether the effect was driven by the perceived lack of autonomy underlying robots' prosocial actions (H2). We used three different ways to manipulate robot autonomy across studies. Study 2 used a 4-condition (robot-neutral, human-neutral, robot-autonomy-yes, robot-autonomy-no) between-subjects design. Participants first read a news report on a fictitious earthquake disaster. Those in the robot-neutral (human-neutral) conditions then read that a robot (human) team came to help with post-quake recovery. In addition, participants in the robot-autonomy-yes condition read a seemingly unrelated article that described how, with the development of artificial intelligence technology, robots have the intelligence and learning capacities to act independently, whereas participants in the robot-autonomy-no condition conversely read about how robots are not capable of acting independently. Results from the robot-neutral and human-neutral conditions replicated Study 1 – people were less inspired by robot rescuers than by human rescuers (Mrobot = 4.03 vs. Mhuman = 5.30; F(1, 266) = 23.13, $p < .001$). Reading about how robots have autonomy made the robots' prosocial action more inspiring than not reading this information (Mrobot-autonomy-yes = 4.75 vs. Mrobot-neutral = 4.03, F(1, 266) = 7.04, $p = .008$), whereas reading about how robots indeed lacked autonomy made no difference in the feeling of inspiration compared to the robot neutral condition (Mrobot-autonomy-no = 3.83 vs. Mrobot-neutral = 4.03, F <1). Study 3 manipulated robot autonomy through varying the reason for the rescue. Following past research (Botti et al. 2009; Chen and Sengupta 2014), we showed that highlighting that the robots made their own decisions (vs. being instructed by humans) to conduct the disaster relief acts enhanced the perception of the robot's autonomy, which consequently made their disaster relief acts more inspiring.

Study 4 manipulated robot autonomy through varying the description of the relationship between robots and humans (Aggarwal 2004; Yanco and Drury 2004). Participants were randomly assigned to one of the three (robot-human relationship: partner vs. subordinate vs. baseline) between-subjects design. Participants first watched a PowerPoint presentation on a recent mudslide in a US city. The PowerPoint presentation described the background of the mudslide, the damage information, and reported that teams of robots had been providing help with the rescue and recovery work. After the PowerPoint presentation, participants read further that the disaster rescue robots work *with* humans as teammates (partner condition), or that the robots work *for* humans (subordinate condition), or did not read anything about the robot-human relationship (baseline condition). As predicted, participants in the partner condition perceived greater autonomy in these robots (M = 2.76) than those in the subordinate condition (M = 1.99) or the baseline (M = 1.90), F(1, 152) > 7.80, ps < .006. As a result, participants felt more inspired in the partner condition (M = 5.26) than in the subordinate condition (M = 4.43) or

the baseline (M = 4.62), F(1, 152) > 3.86, ps < .05. A path analysis verified that perceived autonomy mediated the effect of relationship manipulation on inspiration.

Studies 5 and 6 were built on previous studies to explore the impact of reading about robots' prosocial actions on consumers' own prosocial contributions in unrelated causes (H3). For these studies we collaborated with two local nonprofit organizations to conduct donation drives for books and used clothing, respectively, lasting around three weeks and consisting of two parts: reading about a disaster and donating to the drive. Participants first come to the lab and read a PowerPoint presentation on a recent natural disaster as in previous studies.

Participants also read about the disaster relief efforts conducted by robots (versus humans, Study 5; or different types of robot-human relationships tested above, Study 6). After completing several filler questions, participants saw on the exit page an advertisement on the donation drive. A donation site was set up to collect donations. As predicted, reading about robots (vs. humans) or robots that lacked autonomy (vs. high in autonomy as in taking a partner role with humans) led to significantly lower contributions in the book and clothing donation drives. These findings suggest that featuring how machines/robots assist in prosocial missions should be carefully managed to sustain high inspiration and ensure consumers' own contributions.

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Markets and Material Arrangements

Chairs: Hope Jensen Schau, University of Arizona, USA
Melissa Archpru Akaka, University of Denver, USA

Paper #1: Neoliberalism: The Paradox of Responsibility and Agency in the Acquisition of Materiality

Mary C. Gilly, University of California Irvine, USA
Stephanie Dellande, Menlo College, USA
Russell Nelson, Northwestern University, USA

Paper #2: Retailscapes as Structures of Common Difference: How Materiality Shapes Global Markets and Local Communities

Hope Jensen Schau, University of Arizona, USA
Rodrigo Costa Segabinazzi, Escola Superior de Propaganda e Marketing, Brazil
Melissa Archpru Akaka, University of Denver, USA

Paper #3: Bicycle Helmets and Biking Practices: How Shifting Market Contexts and Adjacent Practices Shape Practice Element Misalignment

Kivalina E. Grove, University of Oregon, USA
Linda L. Price, University of Oregon, USA

Paper #4: Supply Money Can't Buy: Transcendent Consumer Experiences through Living Organ Donation

Tonya Williams Bradford, University of California Irvine, USA

SESSION OVERVIEW

In this session, we examine markets as socially constructed platforms that facilitate value exchange (Vargo and Lusch 2004), provide scaffolding for resources (material and symbolic) to flow within and among complex and ever-evolving social arrangements (Thornton 2004) and tame complexity. We examine material vessels of value as resources and how these resources flow within social systems to enable everyday life. We draw attention to the complex manner in which materiality impacts markets and conversely how markets shape material relations. The session is composed of four empirical studies highlighting the interdependence of materiality and markets: two address the question "How does materiality shapes markets?" and two address the question "How do markets impact material arrangements?"

The first presentation demonstrates how neoliberalist ideas of personal financial responsibility shape and reshape the market for consumer goods. The authors uncover the manner in which the acquisition of materiality through the neoliberalist lens requires consumers to draw and negotiate stark divisions between material wants. They unpack complex neoliberalist-driven consumer sense making that transforms the landscape of consumer goods into justifiable needs and unjustifiable wants, into good and evil material acquisitions. They reveal the manner in which consumers, shamed by the neoliberalist gaze, avoid or apologetically consume as rewards materiality with luxury attributes. The second presentation shows how materiality shapes the global distribution of a social practice. They demonstrate how a regional practice, surfing, is distributed globally through a stylized and codified retailscape governed by structures of common difference (Wilk 1995) that enables elements of the local to be retained. They demonstrate that the retailscapes' material configurations scaffold the exchange of value (material and symbolic) and organize the market. The third presentation reveals how shifting infrastructures, social norms and markets frame and reframe consumers' material relationships and practice assemblages. They show how confluences of market forces, including new modes of bike access,

shape uses and meanings of bicycle helmets across a range of practice contexts. The last presentation demonstrates empirical evidence of how the exchange of intimately singular materiality (bodily organs) is shaped by a highly regulated market for organ donation. This research uncovers themes of navigating participation, negotiating the process and dynamic sourcing of actor resources to precipitate this intimate exchange. Organ donors employ a variety of personal, emotional, physical, social, political and market-facing sources to accrue resources which serve as precursors to activation of additional resources necessary for value creation.

We structure the session as a series of four empirical presentations tightly tied to the theme of materiality and markets. Each presentation will be 12 minutes leaving 20-25 minutes for discussion and debate. While all the presentations have implications for material arrangements, social practices and market configurations, they borrow from a range of intertwined theories including social practices, assemblage, value co-creation and structures of common difference. This session will facilitate scholarly discussion of the complex interplay between markets and materiality. We expect lively audience participation and involvement based around differing substantive and contextual interests as well as eclectic theoretical perspectives.

Neoliberalism: the Paradox of Agency and Responsibility in the Acquisition of Materiality

EXTENDED ABSTRACT

Neoliberalism is the doctrine that "market exchange is an ethic in itself, capable of acting as a guide for all human action" (Harvey 2007: 3). Central to neoliberalism is the primacy of private, individual agency to act within markets and for markets to guide human behavior toward positive, prosocial action. With agency comes requisite responsibility. Individuals within the market are agentic and ultimately responsible for their behaviors. Here, we apply the neoliberal lens to examine how it shapes the market through moralizing the acquisition of materiality.

Consumers within the neoliberal framework are agentic actors tempered by the ethics of the market, specifically the concepts of contractual fidelity and the notions of fair trade and value in kind (Marron 2013). Consumers are charged with conducting themselves within the rules and norms of the market and in engaging in decision-making that supports ethical exchange. Here, we examine consumers who have accumulated debt beyond their ability to abide by their contractual obligations. They are in a crisis state and are danger of default. Our participants have given themselves over to a debt management program (DMP) designed to help consumers pay off past debts and to educate them on financial responsibility to avoid future debt crises. The primary methodology DMPs utilize is budgeting.

DMPs work with indebted consumers to make good on current financial obligations and to create budgets to guide present and future market interactions. An extensive literature in marketing has explored how consumers attempt to control their own behavior and resist the urge to buy (Hoch and Loewenstein 1991; Rook 1987). Effective strategies require clear standards of behaviors, tools for monitoring behaviors against standards, and managing goal conflict (Baumeister 2002). Budgets are a common strategy consumers use to allocate resources towards their goals. Budgets prioritize needs (e.g., shelter, food) with any leftover funds available for wants. This

research stream assumes a rational consumer and uses experimental contexts to understand deviation from normative behavior.

Wants and needs are foundational concepts and categories in economics and marketing; however, prior scholarship does very little to conceptualize the difference between wants and needs. While economists generally define needs as anything urgent and necessary for survival (Galbraith 1998), consumer behavior scholars are more likely to conceptualize needs as those goods society would deem to be "decencies" or "social necessities," which are items needed to preserve a certain level of respectability (Berry 1994; Ger and Belk 1999; Buttle 1989). Wants are typically conceptualized as being less legitimate than needs, with economists arguing that wants are artificially created by advertising. Goods are often categorized as hedonic (wants) or utilitarian (needs) when considering consumer choice (Hirschman and Holbrook 1982). Further, given the ever-increasing selection of goods, the broadening of status and lifestyle games in modern economies (Holt 2004; Thompson and Haytko 1997), and the ability of marketers to make luxuries seem to be necessities (Hamilton, Denniss, and Baker 2005), it is not surprising that consumers themselves often struggle to categorize wants and needs. The socially prescribed bundle of necessary consumer goods has increased over time in parallel with expanding credit card usage (Bernthal, Crockett and Rose 2005; Braun, Zolfagharian and Belk 2016; Peñaloza and Barnhart 2011), further blurring the distinction between wants and needs.

Even a cursory review of treatments of want and need, whether scholarly or secular, reveals that the two are suffused in rhetorical discourses: the way wants and needs are presented often suggests that needs are justifiable and acceptable, but wants have a contested moral status. As Braun et al. (2016, 211) note, wants are considered "indulgences and inferior to needs." Campbell (1998) provides an overview of what he calls the rhetorics of need and want. The rhetoric of need in American culture hails from the Puritan tradition that approves of consumption of items that satisfy utilitarian needs but condemns wanting. While Maslow's famous hierarchy of needs reflects this rhetoric to some degree as utilitarian needs appear at the base of the pyramid, his work acknowledges psychological and social needs, such as the need for connection to others, respect, and self-actualization (Maslow 1970).

We argue that adherence to neoliberalism structures consumer agency forcing them to make tradeoffs between needs and wants to perform responsibly in the market. We examine how consumers create their own categories to justify their spending in real life. While lab studies only allow for short-term impulses, our data are longitudinal. Specifically, our data consist of surveys and interviews with consumers, and interviews with DMP counsellors throughout the program journey. This allows us to witness longitudinally the perceptions, meanings and behaviors of indebted consumers and their counsellors. It explains the data where the indebted clients own responsibility. Most do not blame their debt status on the marketplace deception, but assert that they face a situation of their own making. The issue of "responsibility" has become a defining feature of the current thinking of neoliberalism. We focus on want and need as rhetorics that legitimate or de-legitimate purchase. Vulnerable consumers in a DMP are particularly prone to find rhetorics that convert wants into needs. Emotional needs, situational needs, and social obligations enable consumers to justify purchase of wanted items. It is clear that the traditional dependence on the financial literacy model is not appropriate. The understanding of wants and needs from an academic perspective does not match the lived experience of our indebted consumers. Our results inform the understanding of consumer want, and also offer insights for improving the financial success of consumers.

Retailscapes as Structures of Common Difference: How Materiality Shapes Global Markets and Local Communities

EXTENDED ABSTRACT

Global markets are constructed through the movement of people, images, technology, money and ideas (Appadurai 1990). The fluidity of global phenomena requires stabilizing mechanisms to establish enduring connections across diverse locales. Structures of common difference (SCD) have been recognized as a common global form that enables the movement of global symbols throughout local spaces (Wilk 1995). These common structures have been explored in the context of beauty pageants (Wilk 1995), global brandscapes (Thompson and Arsel 2004), and subcultures of consumption (Kjeldgaard and Askegaard 2006). We extend the study of common global structures by exploring retailscapes as SCD.

Retailscapes organize materiality to create value-laden markets and provide an avenue for the global movement of multiple phenomena. Retailscapes bring together Appadurai's (1990) five global scapes – ethnoscape, mediascape, technoscape, financescape and ideoscape – into one comprehensive platform for globalization. They provide spaces and places for firms to interact and engage in exchange with customers (Arnould, Price and Tierney 1998). Meshing global structures within local communities poses a challenge for companies wanting to engage with a variety of cultures in a cost-effective way. To design retailscapes that appeal to different cultures, maintain brand continuity, and support a specific global market, an understanding of globalization and the processes through which the global coexists with the local is needed. This research uncovers the role of retailscapes in connecting global markets with local communities.

Traditional approaches to globalization promote the idea of global hegemony, while more recent views suggest that the global is adapted to the local and becomes glocal (Robertson 1995). Inspired by prior studies on surfing (e.g., Akaka and Schau 2019; Canniford and Shankar 2012) and annual global sales of US$15.15 billion, we examine the glocal nature of surf retailing, specifically design and organization of materiality within surf shops. Observation of surf retailers reveals a distinct pattern to the store layout, product assortment and aesthetic that supports a particular market mythology, e.g., a narrative centered on the practice of surfing, rather than a brand-oriented narrative. Our research uncovers that while non-surfers comprise the bulk of revenues in this market, the local community is composed of surfers who rely on the same retailers for a variety of resources that enable them to live a particular lifestyle, develop self-identity and engage in the practice of surfing. We address the following research questions: how do surf retailers (local and global) construct, reify and communicate the surfing narrative through their retailscapes? Is there a global retailscape pattern related to the narrative? How do global common structures foster or support the formation of local communities?

To explore the glocal nature of surfing, we conceptualize retailscapes as "structure[s] of common difference" (SCD), that connect dominant global forms with local communities (Wilk 1995). Wilk (1995: 111) draws on Appadurai's work to explore how a "global cultural system promotes difference instead of suppressing it, but difference of a particular kind. Its hegemony is not of content, but of form" (p. 118). The intersection between global and local is both heterogeneous and homogeneous; it is the commonality of cultural

form that enables us to identify differences in cultural *content*. While globalization is presumed to be hegemonic imperialistic intrusion of Western artifacts, ideas and practices (e.g., Levitt 1993), this assertion mutes the agency of localities and obfuscates the role of common forms that enable local cultural differences to be recognized.

By examining surf retailers for global common structures and local meanings, we see how local and global surf brands originating from different regions and nations create, reify and perpetuate myths of 1960s California and the idealized/updated figure of the surfer, through their retailscapes. Products and images are designed primarily to attract nonsurfers to buy surf-related products, like apparel, and utilize the common myth to shape the global surfing market, rather than promoting a single brand or product. Using the idealized California of the 1960s as an inspiration, the surf lifestyle is widely accepted and used in surf retailscape around the world. This narrative provides a common understanding of what surfing is and a means for people to engage with a global practice and market. Likewise, local communities utilize global symbols to distinguish themselves from other locals engaging in surfing and the market.

The global retailscape establishes an enduring structure that perpetuates as it moves across space and time. Even as stark differences in surfing culture can be seen across different local communities – what they wear, how they talk, the formality of relationships – the surfshop retailscape translates across communities in a relatively consistent manner. The types of products, store layout and global brands remain the same. Furthermore, the evolution of surfing over time reveals changes in the equipment (e.g., longboard to shortboard) and the performance (e.g., surfing on the wave vs. above the wave). Throughout these changes, the common structure of the retailscape remains the same. Specific products, brands and styles are replaced, but the dominant narrative of surfing and in-store experience is largely unchanged. These retailscapes stabilize the relationship between the global market and local communities and help to sustain the glocal nature of surfing culture. Our research highlights the importance of materiality of retailscapes in maintaining and growing subcultures of consumption, particularly those that span across both local and global contexts.

Bicycle Helmets and Biking Practices: How Shifting Market Contexts and Adjacent Practices Shape Practice Element Misalignment

EXTENDED ABSTRACT

Practice theory emphasizes whether and how objects are mobilized and integrated with each other into one or more practices (Hand and Shove 2007; Schatzki 2010). Consumer-object relationships are an essential element of many social practices and practices are "intrinsically connected to" objects (Rechwitz 2002; Shatzki 2002, 106). Recent research highlights how object-worlds "are constantly in flux" and calls for more attention to temporal rhythms in everyday life that account for the materiality of practices (Rinkinen, Jalas, and Shove 2015). One issue is that of material misalignment, which occurs when a practice element "demands attention, because it is experienced as hindering, threatening, or harming proper performance." (Woermann and Rokka 2015, 1499). While most material misalignment research focuses on temporary misalignment across an array of practices, either caused by an event or the natural entropy of practice elements that drives temporary misalignment (Woermann and Rokka, 2015; Dion, Sabri, and Guillard 2014; Phipps and Ozanne, 2017), our research considers elements that are chronically misaligned with their practices, with a focus on bicycle helmets.

We examine how a helmet's alignment with the practice of bicycling changes as it moves across time and space and is bundled with and interrupted by different practices and market structures. We contribute to the literature on element misalignment within a practice and between practices. First, we examine element misalignment in the context of the lifecycle of a practice extending from childhood to young adult. Second, we examine how the practice itself is embedded in the practice world and alignment is affected by how elements bump up against adjacent practices. We show how bringing an element back into alignment with a practice depends not only on how the element is embodied within that practice, but also on the way that practice element fits with other adjacent practices. Specifically, we demonstrate that embodiment fluctuates widely, and isn't just a function of the temporary entropy of practice elements, but a function of the way in which the practice itself is embedded in a number of other practices, which results in shifting embodiment as the other elements of the practice array shift, and further contribute to material misalignment.

Bicycling is an increasingly popular activity in the United States with 34% of Americans reporting they rode a bicycle in the past year (Breakaway Research Group 2015). Head injuries are the most common cause of bicycle-related death and serious injury (Centers for Disease Control and Prevention 1999). Bicycle helmets are the single most effective way to prevent head injury in a bicycle crash but usage statistics show that a majority of U.S. adult bicyclists do not wear a helmet while riding (Breakaway Research Group 2015). Bicycle sharing programs are increasingly popular in the United States, such that the number of bicycle sharing bikes more than doubled in 2017 alone (National Association of City Transportation Officials 2017). Our research was conducted through a series of 175 structured and 28 in-depth interviews, as well as a survey of 528 bicyclists in and around Eugene, Oregon, a city that ranked second in the nation for bicycle commuting, with 8.5% of its population reporting using bicycles as their primary method of transportation (Eugene Public Works 2008). Interviews occurred shortly after the installation of a new bicycle-sharing program in Eugene with the explicit mission of improving consumer and community wellbeing. This enabled investigation of the way this infrastructure change affected existing bicycling practices and material misalignment within practices at a community and individual level. Research is ongoing with particular emphasis on the unfolding material and practice consequences of the bike sharing program.

We uncover a complex intersection of temporality, spatiality, and practice surrounding the bicycle helmet. The helmet's meaning and alignment shifts dramatically based on its current temporality, spatiality, and practice bundles. We begin by examining the alignment of the helmet over childhood to early adulthood, uncovering that the initial material alignment of the helmet is not recaptured when the practice itself is reformed. The helmet object is aligned with other practices, but despite a desire to bring this element back into alignment, we uncover only selective alignment in the context of select spatialities. Embodied and embedded complexities together contribute to this persistent material misalignment of the helmet. Embodied complexity consists of both physical and identity misalignment, as we uncover a paradoxical association that helmets simultaneously signify expertise and inexperience on the part of the bicyclist, both of which are identity incongruent for the average bicyclist. Additionally, we uncover misalignment as a result of adjacent practices, such that one element in a practice bundle is differentially affected by adjacent practices so as to throw it out of alignment with the core practice. Despite the properties of this element being

central to the practice itself, this differential misalignment can precipitate the exclusion of this element from the practice itself.

Further exacerbating this misalignment is the introduction of a new market structure in the form of a bicycle sharing program to the community. On one hand, the bicycle sharing program aligns beautifully with both community goals and everyday bicycling practices. However, the bicycle sharing program also exacerbates helmet misalignment in the community. Helmets are not provided when utilizing the sharing program, and participants whose bicycling practices began or shifted to center around use of the sharing program did not include helmets in their practice. This interruption of existing bicycling practices extended even to participants who previously had consistently worn a helmet when riding their own bicycle.

Supply Money Can't Buy: Transcendent Consumer Experiences through Living Organ Donation

EXTENDED ABSTRACT

Marketers strive to generate demand for their offerings. Yet for some marketers, demand may outpace supply. This is most evident in organ and tissue transplantation, where revenue is constrained by supply (Cho et al. 2015). Consider a recent University of Pittsburgh Medical Center television commercial that depicts a line of individuals slowly making their way through an ominous tunnel, with the voice over: "At UPMC, living donor transplants put you first so you won't die waiting." Where most marketing research in healthcare considers a dyadic relationship between clinicians and their patients, UPMC's message foregrounds transplant offerings as a triadic relationship between a firm, patient, and donor. Marketing and consumer research in healthcare domains theorizes roles for consumer participation and compliance for the possibility of attaining desired (Bradford, Grier, and Henderson 2017; Dellande, Gilly, and Graham 2004; Hausman 2004) or transformative (Wong and King 2008) outcomes. Transformative outcomes are more often associated with extraordinary experiences that may result in transcendent consumer experiences. Yet, it is likely that such transcendence is possible through healthcare offerings. Thus, this research explores how healthcare may result in transcendent consumer experiences, and influence markets.

Schouten and his colleagues (2007) characterize transcendent consumer experiences (TCEs) as those consumption experiences that occur through the marketplace which engender feelings of awakening, foster a connection with something larger than the self, encourage the exploration of personal boundaries, and influence consumers' attachment to supporting brands and marketing activities. TCEs often result when consumers engage in extraordinary events such as skydiving, river rafting, mountaineering or Burning Man (Celsi, Rose, and Leigh 1993; Kozinets 2002; Price, Arnould, and Tierney 1995; Tumbat and Belk 2011), as well as through brands and brand communities, as with Harley-Davidson or Xena: Warrior Princess (McAlexander, Schouten, and Koenig 2002; Schau, Muñiz, and Arnould 2009). Where prior research finds such transcendent consumer experiences may result in brand loyalty, this research explores how TCEs resulting from healthcare may influence individuals' attachment to such offerings, and inspire consumers to promote such experiences.

Healthcare is shaped by institutional logics—beliefs and rules that influence consumers' and organizations' behavior (Beverland, Wilner, and Micheli 2015; Dunn and Jones 2010; Lawrence and Suddaby 2006). Some logics found to influence healthcare include care and science, professional and business, or care and research (Dunn and Jones 2010; Reay and Hinings 2009; Toubiana and Ziets-

ma 2017). For example, the care and science logics emerge from the institutions that train clinicians and those that provide the environment for clinical care (Dunn and Jones 2010).Ertimur and Coskuner-Balli (2015, p.40) describe the healthcare market as one where "the care and science logics have coexisted…these logics provide multiple and, from time to time, conflicting prescriptions to stakeholders in the market." The coexistence of logics may influence a market by shaping its course as tensions between logics meld with or contest one another (Dunn and Jones 2010; Kozinets and Handelman 2004; Pache and Santos 2013; Toubiana and Zietsma 2017; Weijo, Martin, and Arnould 2018). In particular, marketing research explains how institutional logics may emerge such that existing logics are challenged, replaced, or evolve by new logics introduced by institutional entrepreneurs (Dunn and Jones 2010; Ertimur and Coskuner-Balli 2015; Giesler 2006; Humphreys 2010; Scaraboto and Fischer 2014). The present research contributes an explanation of how healthcare transcendent consumer experiences may result from the melding of healthcare logics with an additional one: benevolence.

Research finds individuals value marketing activities that are central to transcendent consumer experiences (Schouten et al. 2007). To understand the relationship between TCEs and healthcare institutional logics, this ethnographic study explores a consumer-lead marketing activity: the 2018 Guinness Book of World Record attempt for the largest gathering of living organ donors. This research is guided by the following questions: How do TCEs manifest in healthcare? What is the relationship between institutional logics and TCEs? And, how do those logics influence one another? Prior research finds that coexisting logics may evolve or disrupt markets through the incorporation of new logics (Giesler 2006; Humphreys 2010; Scaraboto and Fischer 2014; Toubiana and Zietsma 2017). This research contributes an understanding of an additional institutional logic operating within the realm of healthcare, benevolence, which may result in transcendent consumer experiences. More specifically, this research contributes an explanation of how co-existing logics may lead to amplification of healthcare logics; how a benevolence logic may result in a transcendent consumer experience; and, how institutional entrepreneurship may result from TCE to support supply creation within healthcare markets.

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This Session is Fake News: The Impact of Fake News and Political Polarization on Media and Attitude Change, and Strategies for Societal Intervention

Chair: Fausto J. Gonzalez, New York University, USA

Paper #1: Opposite Partisan Perspective-Taking Leads to Polarized Assessments of Political News Truth

    Fausto J. Gonzalez, New York University, USA
    Minah H. Jung, New York University, USA
    Clayton R. Critcher, University of California, Berkeley, USA

Paper #2: Perspective-Taking and Self-Persuasion: Why "Putting Yourself in Their Shoes" Reduces Openness to Attitude Change

    Rhia Catapano, Stanford University, USA
    Zakary Tormala, Stanford University, USA
    Derek Rucker, Northwestern University, USA

Paper #3: Leveraging Care/Harm Moral Foundation Among Liberals and Conservatives to Reduce the Dissemination of Fake News

    Hyerin Han, University of Minnesota, USA
    Hyun Euh, University of Minnesota, USA
    TzuShuo Ryan Wang, University of Minnesota, USA
    Akshay R. Rao, University of Minnesota, USA

Paper #4: Fighting Misinformation on Social Media Using Crowdsourced Judgments of News Source Quality

    Gordon Pennycook, University of Regina, USA
    David Rand, Massachusetts Institute of Technology, USA

SESSION OVERVIEW

Becoming wise means becoming more discerning, but social media has made it difficult for people to discern legitimate news from misinformation. Although misleading news is hardly a new phenomenon, the advancement of social media has accelerated the pace at which falsehoods can spread. Some estimates suggest fake news can travel as much as six times faster than legitimate news (Vosoughi, Roy, & Aral, 2018).

To complicate things further, political polarization is driving an unprecedented demand for partisan news—real or fake. Marketing researchers are in a unique position to answer two fundamental questions: What are the psychological consequences of fake news in a polarized environment? What can be done to address the seemingly unending problem of fake news proliferation on social media? The objective of this session is to address the psychological mechanisms and consequences of fake and polarizing news, and to address reasonable steps social media consumers can take to combat the spread of fake news.

In our first paper, Gonzalez, Jung, and Critcher address the polarizing effect of opposite-partisan perspective-taking on perceptions of truth in online news media. Opposite-partisan perspective-taking drives consumers to perceive greater truth in headlines consistent with their own partisan leaning. This occurs regardless of whether or not a headline is fake or real. The evidence suggests that trying to understand an opposing political perspective can backfire, causing consumers to view more bias in opposite-partisan others.

Our second paper, by Catapano, Tormala, and Rucker, explores how perspective-taking can lead to greater polarization of one's attitudes. They find that taking an opposite-partisan perspective leads people to become less receptive to others' arguments and less open to changing their own attitudes. The researchers propose that this is because participants taking the perspective of someone with an opposing viewpoint are likely reminded of how different their own perspective is from those on the opposing side of a debate.

Han, Euh, Wang, and Rao examine the possibility that leveraging a care/harm moral foundation might lead consumers to be less likely to disseminate fake news on social media. By framing an appeal to be congruent with different targets of a care/harm moral foundation among liberals and conservatives (universal caring for liberals, and parochial caring for conservatives), participants are less likely to share political falsehoods on social media.

Finally, Pennycook and Rand investigate the use of crowdsourcing as a tool to fight the spread of misinformation. Despite a political environment where polarization is the norm, the authors find that people still overwhelming trust mainstream news sources more than extremely partisan sources. They find that laypeople can be as accurate as professional fact-checkers at assessing the veracity of news, and suggest using algorithms to up-rank news with high crowdsourced trust ratings.

Together, these papers address the psychological mechanisms and consequences of fake news and political polarization, and provide novel theoretical and practical insights for improving online media consumption. This session takes steps to propose interventions that make consumers less susceptible and more empowered to fight fake news.

Opposite Partisan Perspective-Taking Leads to Polarized Assessments of Political News Truth

EXTENDED ABSTRACT

The rise of online media in a partisan era has driven even reasonable consumers into echo chambers. Many propose that a remedy to polarization is for one to get perspective, to learn from someone at the opposite end of the political spectrum. However, attempting to do so in a polarized environment can backfire. We propose that opposite-partisan perspective-taking will lead people to evaluate partisan-congruent news articles as more truthful, regardless of whether or not the article is legitimate or fake news.

Research on fake news has focused on its proliferation and how this proliferation impacts society. Exposure to misinformation can lead people to confuse fact with fiction, causing doubts about the accuracy of legitimate information (Rapp & Salovich, 2018). Fake news has also been found to spread at a rate six times faster than legitimate news (Vosoughi, Roy, & Aral, 2018). Making matters worse, social media exposure to opposite-partisan messages leads to polarized partisanship (Bail, Argyle, Brown, Bumpus, Chen, Hunzaker, Lee, Merhout, & Volfovsky, 2018), but does polarization change perceptions of political truth?

By one account, attempting to gain a different perspective could dampen one's polarized attitudes. Perspective-taking research demonstrates that it can reduce attitude entrenchment (Tuller, Bryan, Heyman, & Christenfeld, 2015), but evidence also suggests people are likely to perceive greater bias in a person with whom they disagree (Kennedy & Pronin, 2008). We propose that when a person takes the perspective of an opposite-partisan other, they will perceive greater bias in opposite-partisan worldviews, leading them to judge partisan-congruent articles as more truthful.

For our first study we predicted that participants would become polarized when taking the perspective of an opposite-partisan other,

leading them to think partisan-congruent news headlines would be more truthful. We recruited 396 participants from Amazon's Mechanical Turk (MTurk) and randomly assigned them to one of three perspective conditions: *liberal*, *conservative*, and *control*. We first measured participant political orientation, and afterwards participants were told the purpose of the study was to examine how people distinguish between real and fake news. They were told they would see a series of headlines that might appear on a Facebook newsfeed.

Participants in the control condition were asked to rate the extent to which they were interested in reading each story. To induce perspective-taking, participants in the experimental conditions first assessed how truthful a future participant who is either left-leaning in the liberal condition, or a right-leaning person for the conservative condition, would rate each of the headlines (1=*Definitely fake*, 7=*Definitely real*). Before starting, participants were told not to search any of the headlines online, and were excluded from analyses if they indicated on a later attention check that they had. Their task consisted of assessing the likelihood that this future participant would rate a headline as more fake or real. We used headlines from Pennycook, Cannon, and Rand (2019), which consisted of 12 fake and 12 real headlines, evenly split between liberal- and conservative-leaning headlines. After completing the first set of ratings, participants in all conditions were told they would see the same collection of headlines, but this time they would rate the percentage likelihood *they* thought the story was fake versus real news (0% = *Definitely fake*, 100% = *Definitely real*).

We tested whether taking an opposite-partisan perspective led to more polarized assessments of article truth—even when controlling for the actual truth of the headline. We conducted a mixed model in which we included fixed effects of perspective, article orientation, participant orientation, and article truth. To account for the non-independence of participants' multiple judgments, we included a random effect of participant and headline. We found a significant three-way interaction between perspective, article orientation, and participant orientation, $F(2, 9080) = 13.83$, $p < .001$, suggesting that participants became more polarized in their own views when taking an opposite-partisan perspective. Decomposing this interaction further, we found that liberal participants in the conservative perspective condition found liberal-leaning articles to be significantly more truthful $t(9080) = 4.18$, $p < .01$, and conservative participants in the liberal perspective condition found conservative-leaning articles to be significantly more truthful $t(9080) = 3.32$, $p < .01$.

Study 2 (N = 1,276) was a pre-registered replication of Study 1 using new headlines. Once again, we found that our perspective manipulation led to polarized assessments of article truth. We found a significant three-way interaction between perspective, article orientation, and participant orientation $F(2, 29310) = 18.91$, $p < .001$. Decomposing this interaction further, we again found that liberal participants in the conservative perspective condition found liberal-leaning articles to be significantly more truthful $t(29310) = 3.57$, $p < .01$, and conservative participants in the liberal condition found conservative-leaning articles to be significantly more truthful $t(29310) = 4.57$, $p < .01$.

Study 3 (N = 1,436) was a pre-registered replication and extension of Study 2. Using the same headlines from Study 2, we removed news sources to examine if our effects would hold without the partisan signaling of these sources. As predicted, we found a significant three-way interaction between perspective, article orientation, and participant orientation $F(2, 32990) = 31.06$, $p < .001$, where liberal participants in the conservative perspective condition found liberal-leaning articles to be significantly more truthful $t(32990) = 3.91$, $p < .01$, and conservative participants in the liberal perspective con-

dition found conservative-leaning articles to be significantly more truthful $t(32990) = 5.05$, $p < .01$. To better understand the mechanism accounting for our perspective polarization effect, we included in the model a new measure of political differences assessing the degree to which participants perceived greater political bias in opposite-partisan worldviews. Including our political difference measure attenuated the three-way interaction, but not completely, $F(2, 32990) = 18.24$, $p < .001$, lending evidence that greater perceived bias in opposite-partisan worldviews led participants to give polarized assessments of article truth.

This research is particularly relevant to political marketers, where promoting opposite-partisan articles, however well-intentioned, could backfire and have the opposite effect of facilitating understanding. In light of this, marketers should consider alternative methods of advertising to online political news consumers.

Perspective-Taking and Self-Persuasion: Why "Putting Yourself in Their Shoes" Reduces Openness to Attitude Change

EXTENDED ABSTRACT

People are more divided, and less open to opposing views, than they have been in years Nowhere has this been more apparent than in the drifting apart of our two major political parties, leading to unprecedented levels of polarization (Pew Research Center, 2017). This problem is exacerbated by selective exposure—individuals predominantly attend to information that supports their existing attitudes, beliefs, and values (Eagly, Kulesa, Chen, & Chaiken, 2001; Hart et al., 2009; Iyengar & Hahn, 2009; Smith, Fabrigar, & Norris, 2008), and trust news sources and individuals who reinforce their existing attitudes.

Previous research suggests that perspective-taking should be a powerful tool for bridging these growing gaps (e.g., Galinsky, Ku, & Wang, 2005). The current research asks whether perspective-taking *actually* helps reduce attitude polarization, specifically in the context of self-persuasion. Previous work on self-persuasion suggests that when people generate counterattitudinal arguments, they often shift their attitudes toward those arguments (e.g., Briñol, McCaslin, & Petty, 2012), without any outside input. Based on extant research, we might expect this effect to be amplified by perspective-taking. However, we suggest that when people take the perspective of those with different values, they end up generating ideas that are consistent with the other side's values and morals rather than their own. As a result, they are actually less receptive to the other side's position, and show reduced attitude change, compared to if they had simply reflected on arguments for the other side without trying to see the other side's perspective. We test this hypothesis in two preregistered studies.

In Study 1 ($N = 484$), participants recruited from reddit (focusing recruitment on political subreddits) began by reporting their attitudes toward Universal Basic Income (UBI) on a 100-point scale (Against to In favor). Then, participants were told that at a later date, they would interact with another redditor, and received background information about this user, including that they were of the opposite attitude and political ideology. Then, they were asked to generate one argument for the counterattitudinal viewpoint, with varying instructions across two conditions. In the *perspective-taking condition*, participants were asked to take the perspective of the person who they would interact with and generate one argument that that person would give in support of their own view (adapted from the perspective-taking literature, e.g., Clore & Jeffery, 1972). In the *control condition*, participants generated one argument for the opposing viewpoint, with no additional instructions to take anyone's perspec-

tive. After generating the argument, participants were again asked to indicate their own attitude on the 100-point scale, and they also reported their receptiveness toward the view they wrote about, and how congruent their argument was with their own values.

We found a significant effect of the perspective-taking manipulation on value-congruence, receptiveness to the opposing view, and attitude change, $ps < .05$. In addition, perceived value-congruence mediated the effect of perspective-taking on both receptiveness (95% CI [-.19, -.02]); p = .02 and attitude change (95% CI [-.09, -.00]; p = .02). Thus, individuals who tried to take the perspective of the opposition generated arguments that were less congruent with their own values, which undermined their receptiveness to the opposing view and reduced attitude change. This result replicated with a larger sample recruited from an online panel company ($N = 998$).

In Study 2 ($N = 1248$), we aimed to provide further evidence for this process using a moderation approach. If the negative effect of perspective-taking on receptiveness and attitude change is driven by the perception that the arguments generated are incongruent with one's personal values, the effect might be attenuated when people take the perspective of someone who disagrees on the target issue yet has similar overall values. To investigate this possibility, we included two perspective-taking conditions, varying whether participants took the perspective of someone with a similar or different political ideology.

As in Study 1, participants began by reading a description of the target issue (UBI) and indicating their initial attitudes. Then, participants were randomly assigned to one of three argument generation conditions. In the *perspective-taking/different ideology condition*, participants generated an argument that a person with the opposite political ideology would give for the opposing view on UBI. In the *perspective-taking/same ideology condition*, participants generated an argument that a person with the same political ideology as them would give for the opposing view on UBI. In the *control condition*, participants simply generated a counterattitudinal argument. Then, participants reported their attitudes, receptiveness, and perceived value-congruence as in Study 1.

We found a significant overall effect of perspective-taking on value-congruence, receptiveness, and attitude change, $ps < .001$. Participants showed less receptiveness and attitude change in the perspective-taking/different ideology condition than in the perspective-taking/same ideology and control conditions, $ps < .001$. In addition, participants showed marginally *more* receptiveness, $p = .06$, and significantly greater attitude change, $p < .001$, in the perspective-taking/*same ideology* condition rather than the control. Mediation analyses confirmed that perceived value-congruence mediated the backfire effect of perspective-taking on both receptiveness (95% CI [-.04, -.08]) and attitude change (95% CI [-.01, -.04]). Thus, taking the perspective of someone with a different (similar) overall political ideology accentuated (mitigated) the backfire effect of perspective-taking observed in Study 1, by facilitating the generation of value-incongruent (value-congruent) arguments.

These studies suggest that perspective-taking might not be a cure for polarization, as it has been championed, but rather that it can facilitate polarization and thus become yet another factor contributing to the growing chasm between people with opposing viewpoints. This finding suggests that marketers and other influencers should resist the temptation to harness perspective-taking as a means of opening people up to different views. When we ask individuals to put themselves in the other side's shoes, or write a review about why someone else would like a particular product, we may inadvertently remind them of how different their own values are from those of others, foster ideas that are incongruent with those values and,

ultimately, reduce their openness to attitude change. Remedies and implications for consumer behavior will be discussed.

Leveraging Care/Harm Moral Foundation Among Liberals and Conservatives to Reduce the Dissemination of Fake News

EXTENDED ABSTRACT

A number of studies have been conducted to develop a solution to the problem of the sharing of false stories online. Further, practitioners have attempted to address the issue directly, employing lay theories of information processing. For instance, in December 2017, Facebook began adding "Disputed" tags to stories that had been debunked by third party fact-checkers. However, Pennycook et al. (2018) found that this tag was not very effective and could even backfire among Trump supporters. Clayton et al. (2019) tested three types of warning messages – a general warning which shows tips for spotting false news, tagging news as "disputed", and tagging news as "Rated false". They found that "Rated false" tag lowers people's perceived accuracy most, but none of these messages was effective in changing the willingness to share false news. All the existing approaches employed in practice appear to be ineffective, and the task of determining the accuracy of false news stories is daunting. Therefore, rather than relying on news providers to police the veracity of information, we focus on the news consumer and assess whether we can stimulate vigilance by strengthening individuals' internal motivation to identify fake news and to share information responsibly.

In the current study, we develop a new way to reduce people's intention to share false information based on the growing body of research on political ideology and its dispositional nature. Psychological research demonstrates that liberals and conservatives differ from one another in terms of motivational interests and moral foundation. The empirical observation that fake news shared over social media substantially favored Donald Trump over Hillary Clinton (Bucciol, 2018) and conservatives retweeted pro-Republican fake news more often than liberals did pro-Democrat ones (Badawy et al., 2018) could be explained based on this ideological asymmetry (Jost et al., 2018; Fessler et al., 2018). We suspect that the most effective message to change the willingness to share questionable information will be different for conservatives and liberals, based on differences in their ideology.

We focus on care/harm foundation, an element of moral foundations, because, when this moral foundation is active, individuals tend to reduce their reliance on heuristic thinking and use systemic judgment strategies for people they care about (Lerner and Tetlock, 1999). Both liberals and conservatives subscribe to care/harm foundation, but the target of their caring differs (Haidt, 2012). Liberals are more likely to value universalism and steer away from in-groupism such as nationalism. Conservatives, in contrast, are more parochial—concerned about their groups, rather than all of humanity. This parochial caring also corresponds to conservatives' strong relational motivation, such that they place great emphasis on group conformity, loyalty, and group cohesion, and distinguish friends from foes swiftly. Thus, we predict that persuasive appeals that are congruent with different targets of care/harm moral foundation of conservatives and liberals might reduce their willingness to share fake news.

To test our core premise, we presented participants with fourteen news headlines that were entirely untrue (seven stories were selected to be Democrat-consistent and Republican-consistent respectively, drawn from Pennycook and Rand, 2018) and measured their willingness to share each headline (e.g., How much would you be willing to share this story online? How much would you be will-

ing to let other people know about this news? How much would you be willing to show this news to other people? (α = .93)). Participants were randomly assigned to one of two conditions: universalism vs. parochialism message condition. In universalism (parochialism) condition, the following warning message was presented at the top of the screen while participants were doing the main task: "Your sharing can influence all online users and society as a whole (your friends and groups). Please keep in mind that sharing false stories can greatly harm all online users (your friends and groups) by having them develop incorrect beliefs about the world, hindering the success of society as a whole (your friends and groups). Sharing only true stories can benefit all online users (your friends and groups) by broadening their knowledge of the world." After the main task, participants were asked to answer the question "If you absolutely had to choose between only the Democrat and the Republican party candidate, which party candidate would you prefer to be the next President of the United States?", a measure used as a proxy for ideology.

The willingness to share scores were entered into a 2 (Party candidate support: Democrat candidate support, Republican candidate support: between-subjects) × 2 (Warning message type: universalism, parochialism: between-subjects) × 2 (Fake news type: Democrat-consistent, Republican-consistent: within subject) mixed design ANOVA. Participants were more likely to share politically-consistent news than politically-inconsistent ones (p < .001). The two-way interaction between the party of candidate they support and the warning message type on the willingness to share fake news, which is our key prediction, was significant (p < .005), such that Democrat (Republican) party candidate supporters were less likely to share fake news in the universalism (parochialism) message condition regardless of whether the news was consistent or inconsistent with their political ideology. In sum, participants reported a significantly lower willingness to share fake news when presented with persuasive appeals congruent (vs. incongruent) with targets of their care/harm moral foundation, as we had anticipated.

As our next step, we will investigate whether the reduced intention to share fake news occurred due to people's enhanced ability to detect false stories through more engagement in deliberate thinking by using measures such as response times or recall task, or by comparing people's willingness to share false vs. true news. If this effect was simply driven by a lowered general intention to share information due to warning messages, not by peoples' enhanced ability to discern false and true information, there will be a spillover effect from warning messages and willingness to share true headlines will be as low as that of false headlines in a congruent appeal condition. We will also test whether the persuasive appeals congruent with care/harm moral foundation are more effective in reducing willingness to share false stories than other existing appeals.

Fighting Misinformation on Social Media Using Crowdsourced Judgments of News Source Quality

EXTENDED ABSTRACT

The emergence of social media as a key source of news content has created an ecosystem for the spreading of misinformation (Lazer et al., 2018). Here, we consider a scalable approach to fighting misinformation that builds off of collective intelligence and the "wisdom of crowds" (Golub & Jackson, 2010): using crowdsourcing to assess the reliability of news websites, and then adjusting social media platform ranking algorithms such that users are less likely to see content from news outlets that are broadly distrusted.

There are factors that may undermine the success of this approach. First, it is not at all clear that laypeople are well equipped

to assess the reliability of news outlets. Second, news consumption patterns vary markedly across the political spectrum and it has been argued that political partisans are *motivated* consumers of misinformation (Kahan, 2017). By this account, people believe fake news because it is consistent with their political ideology. As a result, sources that produce the *most* partisan content (which is likely to be the least reliable) may be judged as the *most* trustworthy. Third, other research suggests that liberals and conservatives differ on various traits that might selectively undermine the formation of accurate beliefs about the trustworthiness of news sources (Jost, 2017). Finally, it also seems unlikely that most laypeople keep careful track of the content produced by a wide range of media outlets. In fact, most social media users are unlikely to have even heard of many of the relevant news websites, particularly the more obscure sources that traffic in fake or hyper-partisan content.

Here, we investigate whether the crowdsourcing approach is effective at distinguishing between low- versus high-quality news outlets. In the first study, we surveyed *N*=1010 Americans recruited from Amazon Mechanical Turk (MTurk); in the second study, we surveyed *N*=970 Americans recruited from Lucid, a subject pool that is nationally representative on age, gender, ethnicity, and geography. In the second study, we also recruited eight professional fact-checkers to compare to the laypeople. In each study, participants were shown a set of 60 new sources URLs asked if they were familiar with each domain, and how much they trusted each domain. We included mainstream media outlet websites (e.g., cnn.com, npr.org, foxnews.com), websites that mostly produce hyper-partisan coverage of actual facts (e.g., breitbart.com, dailykos.com), and websites that mostly produce blatantly false content (which we will call "fake news", e.g., thelastlineofdefense.org, now8news.com).

The results show that there *are* clear partisan differences in trust of mainstream news: in both studies, Democrats trusted mainstream media outlets significantly more than Republicans (S1: 11.5 percentage point difference, $F(1,1009) = 86.86$, $p < .0001$; S2: 14.7 percentage point difference, $F(1,970) = 104.43$, $p < .0001$). The only exception was Fox News, which Republicans trusted more than Democrats (*post hoc* comparison; S1: 29.8 percentage point difference, $F(1,1004) = 243.73$, $p < .0001$; S2: 20.9 percentage points, $F(1,965) = 99.75$, $p < .0001$).

Hyper-partisan and fake news websites, conversely, did *not* show consistent partisan differences. In Study 1, Republicans trusted both types of unreliable media significantly more than Democrats (hyper-partisan sites: 4.0 percentage point difference, $F(1,1009) = 14.03$, $p = .0002$; fake news sites: 3.1 percentage point difference, $F(1,1009) = 7.66$, $p = .006$). In Study 2, conversely, there was no significant difference between Republicans and Democrats in trust of hyper-partisan sites (1.0 percentage point difference, $F(1,970) = 0.46$, $p = .497$), and Republicans were significantly *less* trusting of fake news sites than Democrats (3.0 percentage point difference, $F(1,970) = 4.06$, $p = .044$). Accordingly, there was a significant overall interaction between party and source type ($p < .0001$ for both studies).

Critically, however, despite these partisan differences, both Democrats and Republicans gave mainstream media sources *substantially* higher trust scores than either hyper-partisan sites or fake news sites (S1: $F(1,1009) > 500$, $p < .0001$ for all comparisons; S2: $F(1,970) > 180$, $p < .0001$ for all comparisons). While these differences were significantly smaller for Republicans than Democrats (S1: $F(1,1009) > 100$, $p < .0001$ for all comparisons; S2: $F(1,970) > 80$, $p < .0001$ for all comparisons), Republicans were still quite discerning. For example, they trusted mainstream media sources often seen as left-leaning, such as CNN, MSNBC, or the New York

Times, more than well-known right-leaning hyper-partisan sites like Breitbart or Infowars.

When calculating an overall trust rating for each outlet by applying equal weights to Democratic-leaning and Republican-leaning participants (creating a "politically balanced" layperson rating that should reduce concerns regarding social media platforms having a partisan bias), every single mainstream media outlet received a higher score than every single hyper-partisan or fake news site (with the exception of Salon.com in Study 1). Additional analyses show that this remains true when restricting only to the most ideological participants in our sample, when considering only men versus women, and across different age ranges.

Furthermore, the politically balanced layperson ratings correlated highly with fact-checker ratings, $r(58) = .90$, $p < .0001$. Thus, we find remarkably high agreement between fact-checkers and laypeople. This agreement is largely driven by both laypeople and fact-checkers giving very low ratings to hyper-partisan and fake news sites: *post hoc* analyses show that, when only examining the 20 mainstream media sources, the correlation between the fact-checker ratings' and the politically balanced ratings falls to $r(18) = .32$.

Analyses of the familiarity responses suggest that people are initially skeptical of news sources, and may come to trust an outlet only after becoming familiar with (and approving of) the coverage that outlet produces. As a result, familiarity is necessary but not sufficient for trust.

These observations provide evidence that crowdsourcing is a promising approach for identifying highly unreliable news sources, although not necessarily for differentiating between more or less reliable mainstream sources. Thus, having social media platforms algorithmically disfavor news sources with low crowdsourced trustworthiness ratings may – if implemented correctly – be quite effective in decreasing the amount of misinformation online.

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Narrative Consumption: How Stories Transmit Wisdom

Chairs: Anne Hamby, Boise State University, USA
Matthew Farmer, University of Arizona, USA

Paper #1: Story Symbols: How Meaningful Stories Enhance the Value of Story-Connected Objects

Anne Hamby, Boise State, USA
Ali Tezer, HEC Montreal, Canada
Jennifer Escalas, Vanderbilt University, USA

Paper #2: Walk a Mile in Someone Else's Relationships: How Loneliness Affects Narrative Processing of Social Ads

Alice Wang, University of Iowa, USA
Jennifer Escalas, Vanderbilt University, USA

Paper #3: Navigating Narratives: Time and Space Navigation and Narrative Experiences

Stephanie Feiereisen, Montpellier Business School, France
Dina Rasolofoarison, Paris Dauphine University, France
Cristel Russell, Pepperdine University, USA
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Paper #4: Moved by Scary Stories: How Fear Drives Narrative Transportation

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SESSION OVERVIEW

Though consumer society has undergone rapid transformation over the past decades, for centuries storytelling and story consumption have remained a constant, defining feature of humanity. People enjoy and actively seek out stories. However, stories are not mere entertainment; they shape the beliefs and behaviors of those who consume them, including the understanding and transmission of wisdom. As noted in the 2019 ACR call for submissions, "Wisdom needs to be transmitted from communicator to listener, or author to reader. Storytelling is one way to accomplish this."

This session focuses broadly on story consumption and its effects on consumers in general, and with reference to wisdom more specifically. The objective of the session is to illustrate individual consumer factors and narrative (message) factors that influence the experience of narrative consumption, as well as the downstream consequences of narrative consumption for consumers' attitudes and behaviors. Consumer wisdom may be exercised before or during consumption (i.e., in selecting or navigating content in a wise or unwise fashion), or enhanced as a consequence of this process (i.e., transferring wisdom). Hamby, Tezer, and Escalas show that narrative content communicating meaningful or "wise" messages can evoke the audience response of eudaimonic pleasure (in contrast to the hedonic focus of a great deal of consumer narrative researcher), which has consequences for how readers value story-connected objects. Farmer and Nielsen also examine the influence of a narrative message factor on narrative consumption and responses, namely that of fear appeals. They show that stories featuring fear focus attention and enhance narrative transportation (Green and Brock 2000), a persuasive process which can facilitate the adoption of wise consumer attitudes. Wang and Escalas focus on a consumer characteristic that can influence how narratives are consumed: they show how the increasingly prevalent experience of consumer loneliness influences responses to narrative advertisements that feature a social appeal. Lonely consumers identify less with social appeals, and are less transported and influenced by the narrative. Finally, Feiereisen, Rasolofoarison, Russell and Schau focus on the experience of narrative

consumption itself and broaden the traditional perspective to include factors related to the consumption environment. Specifically, they examine how individuals navigate narratives across time and space, and advance a theory of narrative navigation.

All of the papers included in this session expand our understanding of narrative consumption and influence beyond van Laer and colleagues' (2014) model of narrative transportation: each of the papers addresses novel antecedents and consequences of narrative consumption, from a variety of methodological perspectives. In addition, each of the papers address the question of how narratives communicate or promote consumer wisdom and well-being, in keeping with the theme of the conference.

Story Symbols: How Meaningful Stories Enhance the Value of Story-Connected Objects

EXTENDED ABSTRACT

Can reading a fictional narrative about an object influence how much consumers are willing to pay for that object, despite awareness that the story is fictional? Moreover, does it depend on what the story is about? The current research examines how variation in narrative meaningfulness, an underexplored aspect of narrative content, leads to an increase in the valuation of an object depicted in a narrative. Drawing from self-determination theory (Ryan and Deci 2001), we define meaningful narrative content as that which communicates a message about relatedness, competence, and/or autonomy. In contrast to enjoyable content which may evoke hedonic pleasure, meaningful narrative content evokes eudaimonic pleasure, which is associated with significance, self-realization, and broader well-being (Oliver and Raney 2011; Ryan and Deci 2001).

We show that meaningful (vs. simply enjoyable) narrative content enhances the valuation of objects that are central to the narrative plot, and this occurs because the eudaimonic pleasure evoked by meaningful narrative content transforms the object depicted in the story into a symbol of the meaning derived from the narrative (a serial mediation process). We assert that this process occurs separately from the hedonic affect transfer process shown in consumer research on narrative transportation to date (e.g. van Laer et al. 2014). Narrative transportation, the extent to which the reader is immersed in a narrative, is characterized by emotional engagement, generation of mental imagery, and allocation of attention to the narrative world events, and is an inherently enjoyable process (Escalas 2007; Green and Brock 2000), and has been examined as the primary mechanism in narrative persuasion.

Overall, the current work makes three main contributions to consumer research on narrative consumption: First, we identify and define meaningful narrative content as an influential dimension of a narrative, building on prior consumer research on narratives (Escalas 2007; Van Laer et al. 2014). Second, we link meaningful narrative content to eudaimonic pleasure and demonstrate its influence on consumers' valuation of an object, providing a complementary perspective to consumer research that examines hedonic pleasure (Hirschman and Holbrook 1982). Third, we illustrate the role of eudaimonic pleasure as a value and symbol-creation mechanism, connecting narrative persuasion research to literature which describes how symbols obtain their meanings (i.e., McCracken 1989; Mick 1986).

We accomplish this across five studies. In the first two studies (1A and 1B), we examine the influence of eudaimonic pleasure on the valuation of objects. In study 1A we demonstrate that eudaimonic pleasure is a result of narrative transportation into a meaningful story, and it subsequently influences object valuation by ascribing the object with symbolic meaning (βs > .18, ps < .01; β = .03, SE = .01, 95% CI = .02, .04). We also replicate (and control for) the existence of a hedonic path, in which transportation influences hedonic pleasure, positive affect, which also enhances object valuation βs > .17, ps < .01; β = .02, SE = .01, 95% CI = .01, .03). In study 1B, we manipulate the meaningfulness of narrative content (high vs. low) to distinguish the role of eudaimonic pleasure on object valuation, and replicate the results of study 1A: we show that participants in the meaningful narrative condition valued the object more (M = 4.35, SD = 1.23) than those in the simply entertaining narrative condition (M = 3.37, SD = .95; F(1, 94) = 18.93, p < .001). In addition, participants state more interest in purchasing raffle tickets to win an object associated with the meaningful (M = 4.35, SD = 1.23; versus entertaining; M = 3.37, SD = .95) story (F(1,94) = 4.51, p < .05).

Study 2 exposes consumers to a single meaningful story and manipulates cognitive load to prevent narrative transportation, thus reducing eudaimonic pleasure and symbolic meaning transfer. The results revealed that participants in the low cognitive load condition (M = 5.23, SD = 1.02) had higher evaluation of the object compared to those in high cognitive load condition (M = 4.87, SD = 1.02; F(1,100) = 3.85, p = .048), and the indirect effects suggest that this occurs through suppressing the eudaimonic pleasure experienced (β = .05, SE = .03, 95% CI = .01, .12). Together, these first three studies demonstrate that meaningful content evokes transportation and eudaimonic pleasure, which enhances object valuation because the objects become symbols of the meaning conveyed by the narrative.

Studies 3 and 4 explore boundary conditions. Study 3 shows that the positive effect of meaningful narrative content on the valuation of the object featured in the narrative is conditioned on the centrality of the object to the narrative plot: We conducted a repeated measures ANOVA on the willingness to pay for objects central and peripheral to a narrative plot as a within-subjects factor, and included narrative content (meaningful vs. simply entertaining) as a between-subjects factor. Tests of within-subjects effects revealed a main effect of object (F(1, 86) = 44.83, p < .001, η_p^2 =.343) such that the plot-central object evoked overall higher willingness to pay (M = 2.73, SD = 1.87) than the peripheral object (M = 1.51, SD = 1.31). Study 4 adopts a 2 (narrative content: meaningful, entertaining) x 2 (purchase: for self, as gift) design to test a second boundary condition of the target for purchase. In the meaningful narrative condition, the object was valued more when the participants imagined purchasing it for the self (M = 3.26, SD = 1.29) relative to purchasing it as a gift, where the story is not included (M = 2.59, SD = .92; F(1,187) = 7.92, p = .005, η_p^2 = .041). In the entertaining narrative condition, the effect of purchase context reversed (Purchase as gift: M = 3.17, SD = 1.30; Purchase for self: M = 2.74, SD = 1.10; F(1,187) = 3.12, p = .08, η_p^2 = .016). Study 4 provides further process evidence of the proposed model with moderated serial mediated. Our results underscore the richness in the ways that stories create value for consumers, and how this value comes to be captured in objects.

Walk a Mile in Someone Else's Relationships: How Loneliness Affects Narrative Processing of Social Ads

EXTENDED ABSTRACT

One of the most fundamental human needs is the need for social relationships (Baumeister and Leary 1995). Hence loneliness, the subjective feeling of social isolation, has a significant impact on consumers (Cacioppo et al. 2002; Baumeister, Twenge, and Nuss 2002). And the problem of loneliness is growing: screen time on tech devices is significantly related to an increase in felt loneliness and a decrease in life satisfaction (Stepanikova, Nie, and He 2010). Consumer researchers have examined various consequences of loneliness such as product endorsement (Wang, Zhu and Shiv 2012) and impulsive consumption (Sinha and Wang 2013). Here, we explore another important, understudied consequence of loneliness—how lonely consumers process narratives.

A large number of marketing communications take the form of narratives, often depicting some form of social interaction between characters. The narrative literature suggests that stories persuade via the experience of transportation—the feeling of being caught up or "lost" in the narrative. In order to experience transportation, the audience often identifies with the characters, takes their perspectives, and empathizes with them. Thus, narrative persuasion depends on how individuals relate to and identify with story characters and their interpersonal relationships.

Extant research on loneliness shows that it disrupts individuals' executive control, attention, and self-regulation (Campbell et al. 2006; Wondra and Ellsworth 2015), all of which are critical for them to identify with others (Jackson, Meltzoff, and Decety 2005). Indeed, Cacioppo et al. (2009) found that when looking at pictures of people in peril, activation of the temporoparietal junction, an area involved in perspective taking, was weaker among lonely participants. Therefore, existing research suggests that lonely people are less likely to identify and emphasize with others.

In this research, we investigate how loneliness affects consumers' transportation into marketing narratives, depending on their social nature. We predict that lonely people will have difficulty identifying with characters engaged in social interactions in marketing narratives, reducing the likelihood that they become transported and persuaded by the ad. Alternatively, narratives about a person using a product alone will not affect the likelihood that lonely and non-lonely consumers are transported and persuaded. We tested our hypotheses across five studies.

Study 1A measured participants' felt loneliness and their transportation into and attitudinal responses toward a social narrative storyboard ad. We also measured a number of plausible confounds such as need to belong, depression, affect intensity. We found that lonely participants were less transported into the ad (β = -.22, p < .01) and had less favorable attitudes toward the ad and the product (β = -.014, p = .05). Mediation analysis showed that the effect of loneliness on attitude was mediated by ad transportation. Similar regression analyses with need to belong, depression, affect intensity indices ruled them out as alternative explanations.

Study 1B measured participants' loneliness and exposed them to a different social narrative ad featuring pretzel snacks. They then chose one of five different kinds of snacks from a vending machine located in the lab (without charge). On average, 11% of participants chose the pretzel snack from the vending machine. As participants became lonelier, they were marginally less likely to choose pretzels after seeing the socially focused, narrative pretzel ad (Wald's c^2 =

3.41, p = .06), with prior attitude towards pretzels and time of day as covariates.

Study 2 manipulated the extent to which the narrative focuses on social relationships by changing some pictures and text. With a different product category, we found significant interactions of loneliness and ad focus on transportation ($\beta = .21$, $p < .05$) and attitudes ($\beta = .018$, $p = .06$). Lonely (vs. non-lonely) participants were less transported into the social ad ($\beta = -.35$, $p < .01$) and had less favorable attitudes ($\beta = -.03$, $p < .01$). However, participants' transportation into ($\beta = .74$, $p > .60$) and attitudes toward ($\beta = .002$, $p > .90$) the non-social ad did not vary by loneliness. We found a significant moderated mediation: transportation mediated the effect of loneliness and ad focus on attitude for the social ad, but not for the non-social ad.

Study 3 manipulated both participants' loneliness and the social focus of the narrative. Participants first wrote about a lonely or socially connected experience, and then responded to either a social ad or a non-social ad. We found significant interactions on transportation ($F(1, 131) = 5.55$; $p < .05$) and attitudes ($F(1, 131) = 5.06$; $p < .05$). Lonely (vs. non-lonely) participants were less transported into the social ad (48.43 vs. 54.04, $t = -2.09$; $p < .05$) and had less favorable attitudes (4.18 vs. 4.56, $t = -1.69$; $p = .09$). However, lonely (vs. non-lonely) participants were equally transported into the non-social ad (52.53 vs. 48.54, $t = 1.4$; $p > .10$) and had equally favorable attitudes (4.47 vs. 4.04, $t = 1.61$; $p > .10$). We found a significant moderated mediation: transportation mediated the effect of loneliness on attitude for the social ad, but not for the non-social ad.

Study 4 explored the process underlying these effects by manipulating the protagonist of a socially focused narrative ad: either a third person character, or second person "You." Loneliness was measured. We found significant interactions of loneliness and ad focus on transportation ($t = 2.76$, $p < 01.$) and attitudes ($t = 2.56$, $p = .01$). Lonely (vs. non-lonely) participants were less transported into the 3rd person ad ($\beta = -.38$, $t = -2.76$, $p < .01$) and had less favorable attitudes ($\beta = -.034$, $t = -2.65$, $p < .01$). However, participants' responses to the 2nd person ad did not vary by their felt loneliness for either transportation ($\beta = .16$, $t = 1.17$, $p > .24$) or attitudes ($\beta = .01$, $t = .99$, $p > .30$). We found a significant moderated mediation: transportation mediated the effect of loneliness on attitude for the third-person ad, but not for the "You" ad.

Together, these studies demonstrate that lonely consumers are not transported into or persuaded by narrative advertisements that highlight social relationships for characters other than themselves.

Navigating Narratives: Time and Space Navigation and Narrative Experiences

EXTENDED ABSTRACT

Consumers engage with a wide range of narratives, including books, comics, movies and TV series. Extant work has shown that cultural producers are increasingly telling single stories across multiple platforms and formats via a process of transmedia storytelling (Ilhan, Otnes and Kozinets 2013; Jenkins 2006; Scolari 2009) and that interpretive communities (Fish 1980; Schau and Muñiz 2004) co-produce narrative materials. Despite the noteworthy contributions of these studies, we still know little about the ways consumers navigate narratives and about how consumers experience narratives when many additional transmedia narratives are available.

In developing a comprehensive theory of narrative consumption, we attempt to reconcile theories that have positioned the consumer as an immersed (often sole) 'reader' who becomes "lost" in a story via narrative transportation into that story (Green and Brock 2000, p. 702) and theories that embrace the co-creative power of consumers in actively shaping the meaning of narratives (Chronis 2008; Stern 1989), and forming active communities of interpretation around narrative brands (Kozinets 1997, 2001; Parmentier and Fischer 2014; Russell and Schau 2013). We also draw on the reading literature, in particular the needs and gratifications derived from reading for pleasure, along with the notion that readers control the pace at which they read books, either savoring them or instead behaving like "gluttonous" readers (Nell 1988, p. 42). Furthermore, we conceptualize narrative navigation as a form of intertextual navigation, building on the literature on intertextuality which views the text as the site of a complex interaction between different texts that together form a textual system (Kristeva 1969).

This study uses an interpretive research strategy. Informants are consumers who regularly watch TV series. These informants provided insights through 21 in-depth interviews. Sixteen of these informants completed a diary over a period of two weeks prior to the in-depth interview. These data were supplemented by forum thread analysis of *The Big Bang Theory*, *Game of Thrones* and *Westworld* with 103 threads selected for popularity and relevance to intertextuality, character discussion and viewing cadence and 51,235 messages. Finally, we conducted video-recorded ethnographies of TV series viewers' behavior (Jayasinghe and Ritson 2013) with member check interviews. The video-recorded ethnographies were conducted with 11 informants (5 couples and one single informant) who reported watching TV series very regularly. These video-recorded ethnographies were vital to deepening our understanding of the navigational movements consumers use when watching TV series alone or with others.

Our findings highlight the dynamics of how consumers navigate narrative time and narrative space. Consumers may navigate the narrative in a linear manner, whereby they do not modify the pace of the narrative. Furthermore, many of our informants navigate time to either decelerate narrative pace (e.g., by spacing out viewing between episodes) or accelerate narrative pace via binge-watching (i.e., the practice of watching multiple episodes of a television program in rapid succession). However, in contrast with the readers in Nell (1988), some of our informants may lose temporal control and experience guilt after binge-watching. In addition, TV series viewers may engage in temporal augmentation to increase the time they spend consuming the narrative (e.g., by replaying scenes or episodes). Beyond time navigation, consumers may engage in space navigation, either by contracting narrative space (e.g., skipping scenes or even episodes), which also accelerates narrative pace, or by expanding from the primary space of the narrative to other spaces, such as the transmedia space (e.g., by reading online summaries of the episodes), the social space (e.g., by discussing the series with peers) or the mental space (e.g., by spending time pondering what will happen next in the series). Interestingly, we note instances of interactive dynamics where consumers engage in space expansion while shortening the time they spend consuming the narrative. We then explore the driving factors of narrative navigations. Specifically, when and why might consumers prize different types of time and space navigations? We unwrap three drivers of narrative navigations: (1) the text's gravitational pull, which includes narrative density, closure and pace, (2) consumers' relationships to time and space and (3) the social context and interpretive communities. Several narrative experiences arise from the time and space navigations we observed. Particularly noteworthy is that distinct narrative navigational movements may lead to the same narrative experience. Furthermore, the same navigational endeavors may lead to different narrative experiences. For example, two of our informants, Leonard and Penny, both report reading online summaries of the episodes of

the series that they follow and then watching selected scenes only, thereby expanding into the transmedia space but shortening the time they spend consuming the narrative. However, their narrative experiences are entirely different as they have different aims for engaging in this narrative navigation: Leonard's aim is to save time whereas Penny strives to remove any uncertainty and suspense associated with the storyline. While these consumers do not create their own fan fiction as in extant work by Schau and Muñiz (2004) and Jenkins (2012), they do bear similarities with these fans as they reframe the series' narrative to suit their needs and express their own desires by skipping the content they do not wish to see. This finding adds to the literature on the tension between corporate and consumer control (Kates 1997), as we find that consumers reject parts of the narrative.

This research puts forward a theory of narrative navigation. The study reveals how consumers navigate narrative time and space, when and why they may prize certain navigations over others and the distinct ways in which they experience narratives beyond narrative transportation. Although digital tools and technologies render navigation across spaces faster and more synchronous, the dynamic experiences we uncover do not seem bound to digital media narrative consumption. We discuss the implications of our findings for narrative theory, along with theories of transmedia storytelling and interpretive communities.

Moved by Scary Stories: How Fear Drives Narrative Transportation

EXTENDED ABSTRACT

Public health advocates use emotional narratives to warn consumers about dangerous behaviors like distracted driving. While we still do not fully understand if and how fearful narratives persuade consumers, research has found that people who consume a captivating story can reach a state of immersion known as narrative transportation that leads to the adoption of story-based beliefs, attitudes, and intentions by reducing counterarguing against the narrative's message (Green and Brock 2000; van Laer et al. 2014). Despite the widespread use of emotional narratives, emotions have played a surprisingly small role in narrative transportation research (c.f., Escalas 2004). Because fear is commonly used in narrative persuasion, it is important to understand how fear affects known narrative transportation processes. We draw on existing models of fear and apply them to the narrative transportation model to predict that fear drives narrative transportation through an increase in attentional focus. We also show that this increase in narrative transportation makes fearful narratives more persuasive by reducing counterarguing.

Extant literature does not currently yield clear predictions about how fear will impact the narrative transportation process. On the one hand, fear can cause consumers to avoid or otherwise resist a potentially threatening message (e.g., Janis and Feshbach 1953; Janis and Terwilliger 1962), which would inhibit the attentional resources required for transportation to occur (Green and Brock 2000; Nielsen and Escalas 2010). For example, a scary distracted driving advertisement may be so intense that it causes consumers to focus on other objects in their environment or even change the channel. On the other hand, fear can increase attentional focus toward threatening stimuli (Coleman et al. 2017; Pratto and John 1991), which would enhance the attentional resources that drive narrative transportation. If this were the case, a scary distracted driving advertisement would cause consumers to instead tune out distractions and attentively watch the entire advertisement. Recent research has suggested that the latter response, in which fear drives increased attention toward the narrative, is more likely if consumers feel like they can respond

to the threat presented by the fearful message (i.e., by turning their phones off while driving; see Basil and Witte 2014). Thus, we posit that fearful narratives will increase attention toward the narrative and boost narrative transportation, which in turn will more effectively persuade consumers by reducing counterarguing.

In all studies, participants saw narrative ads in the form of storyboards (Escalas 2004; Nielsen and Escalas 2010) aimed at curbing distracted driving. Depending on the condition, these narratives were either neutral or fear evoking and were always followed by a measure of narrative transportation (Green and Brock 2000).

In study 1, we randomly assigned 234 participants to watch either a neutral or fearful version of the storyboard for a public service announcement titled "It Can Wait". Participants then completed three 9-point scales: the narrative transportation scale (Green and Brock 2000), a scale to measure counterarguing (Nabi, Moyer-Gusé, and Byrne 2007), and a persuasion scale that we developed (α=.84; e.g., "Do you consider distracted driving to be more of a concern after viewing the message?"). Results confirmed that participants who viewed the fearful version of the PSA indicated increased transportation ($M_{Neutral}$=5.63, $M_{Fearful}$=6.25, $F(1,233)$=13.48, $p < .001$) and persuasion ($M_{Neutral}$=5.41, $M_{Fearful}$=6.59, $F(1,233)$=32.60, $p < .001$), and decreased counterarguing ($M_{Fearful}$=2.61, $M_{Neutral}$=3.27, $F(1,233)$=15.24, $p < .001$). The results confirm that the direct effect of fear on persuasion was mediated first by an increase in transportation and then by a decrease in counterarguing (β=.04, 95% CI [.01, .10]; PROCESS model 6, Hayes 2009).

Study 2 was designed to more directly test the role of fear as a driver of transportation by introducing incidental fear prior to the narrative. We randomly assigned 195 students to either write about a time in their life when they were really scared (fearful condition) or a place with which they were familiar (neutral condition; Passyn and Sujan 2006). Participants then watched the neutral PSA used in study 1. Analysis revealed that the fearful condition led to higher transportation into the subsequent PSA than the neutral condition ($M_{NeutralPrime}$=5.70, $M_{FearPrime}$=6.21, $F(1,194)$=7.84, $p < .01$).

To further demonstrate that fear is a driver of transportation, study 3 introduced a fear-evoking message either very early or very late in the narrative. In other words, the fearful content and PSA were held constant between conditions; only their order was manipulated. Results confirmed that those who saw the fear evoking message before (vs. after) the storyboard images experienced higher transportation ($M_{FearBeginning}$=6.37, $M_{FearEnd}$=5.94, $F(1,195)$=4.25, p=.041) and persuasion ($M_{FearBeginning}$=6.74, $M_{FearEnd}$=6.22, $F(1,195)$=4.18, p=.042) by the "don't text and drive" message. Transportation mediated the effect of the fearful stimulus order manipulation on persuasion (IE = .34, 95% CI [.01, .69]).

Studies 4a and 4b established evidence that attention is responsible for the effect of fear on narrative transportation. In study 4a, we replicated study 2 by manipulating fear and showing the same PSA storyboard, but with a series of symbols at the outer edge. Those in the fearful (vs. neutral) condition noticed fewer of these symbols on the edge of the screen ($M_{FearPrime}$=1.69, $M_{NeutralPrime}$=2.26, $F(1,149)$=4.07, p=.045) while still passing two attention check questions, demonstrating that they paid more attention to the narrative. In study 4b, we randomly assigned participants to one of two versions of the PSA: one in which the storyboard was surrounded by a blank white screen (control condition) and one in which the storyboard was surrounded by several pictures and links that changed every five seconds (distraction condition). Those in the distraction condition were less transported by the narrative storyboard than those in the control condition ($M_{Distraction}$=6.00, $M_{Control}$=6.42, $F(1,193)$=3.72, p=.055). Together, these studies provide initial evidence that fear

boosts narrative transportation by increasing focused attention toward the narrative.

Narratives frequently elicit emotional responses in consumers, and those responses are not always positive. The current research investigates one important context in which the responses to narratives are not expected to result in positive affect (i.e., fear appeals) and explores how fear can drive more narrative transportation and, consequently, more persuasion.

Public health advocates often use narratives to warn consumers about the dangers of certain behaviors, such as texting and driving. However, we still understand relatively little about how narratives that elicit negative emotions persuade consumers. In the current work, we find that fear arousal increases focused attention toward the narrative, which in turn boosts narrative transportation and augments the persuasive power of the advertisement by reducing counterarguing against the message. This work enhances our understanding of how narratives that elicit negative emotions can persuade consumers and also contributes to research on narrative transportation by showing how negative emotions can work as antecedents to narrative transportation.

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Self-Conscious Emotions: Characteristics, Coping Strategies, and Consequences

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Paper #1: The Self-Conscious Consumer: Understanding and Mitigating Consumer Embarrassment

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Paper #2: To Show Off or To Shy Away: The Effect of Self-Conscious Emotions on Self-Checkout Usage

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Paper #3: The Fighter and the Caregiver: Brands that Help Individuals with Self-Esteem and Social Exclusion Threats

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Paper #4: Attitudes Based on Feelings: Fixed or Fleeting?

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SESSION OVERVIEW

Emotions are an integral part of the human condition. A substantial body of work has established the central role that moods and feelings play in consumers' everyday lives, from how consumers think and decide, to the way they comprehend the world around them. In particular, self-conscious emotions (such as pride and embarrassment) differ from more basic emotions (such as joy and sadness) in that they cannot be described solely by facial expressions, but rather, require cognitive self-reflections—particularly self-awareness and self-representation—for their elicitation (Lewis 2007; Tracy and Robbins 2007).

This special session brings together four papers that explore different facets of emotions, examining their essential characteristics, their consequences for both consumers and marketing managers, and how consumers cope with them and how managers may help consumers better manage them. Each of the papers asks an interesting question, takes a unique methodological approach, and provides exciting findings that could spur future research.

The first paper by Herd, Aydinoglu, and Krishna examines factors affecting felt and anticipated embarrassment. It studies how cognitive resources and deliberation influence self-appraisal and resulting embarrassment. The authors find that, while high level of deliberation increases the feeling of embarrassment induced by purchasing embarrassing products, this feeling can be effectively mitigated by cognitive load and distraction.

The second paper and the third paper study the coping strategies consumers adopt to manage self-conscious emotions. The second paper by Lee, Lee, Li, Zhang, and Chong explores the effects of self-conscious feelings on grocery shopping, focusing on one negative (embarrassment) and one positive emotion (pride). The research finds that, when buying embarrassing products, consumers coped with the embarrassment by using self-checkout (vs. human cashiers). An opposite pattern was observed when consumers purchased products that elicited pride.

The third paper by Ulqinaku, Sarial-Abi, and Inman studies how consumers use brands to cope with negative self-conscious emotions. The authors show that individuals with self-esteem threats prefer fighter brands, and individuals with social exclusion threats prefer caregiver brands. Additionally, they found that these brands help individuals engage in problem-focused (i.e., the fighter brand) or emotion-focused (i.e., the caregiver brand) coping to mitigate the effects of these psychological threats.

The last paper by Rocklage and Luttrell shifts gears and focuses on the effect of emotion on attitude stability. The authors found that whereas some consumer attitudes are fixed, others are fleeting. Across six longitudinal studies and linguistic analysis of 80,000 Yelp reviews, the authors found that the more an attitude was based on emotion, the longer-lasting that attitude. Moreover, consumers appear unaware of this connection.

Together, employing different research methods, these four papers present distinct yet synergistic findings that further our understanding of consumers' emotional lives. The topics of the four papers are fundamental to consumers' everyday lives, and this special topic session should be of great interest not only to marketing researchers, but also to anyone who is interested in the factors and strategies that can improve our understanding and management of consumer emotions.

The Self-Conscious Consumer: Understanding and Mitigating Consumer Embarrassment

EXTENDED ABSTRACT

Previous research distinguishes between more spontaneous, hedonic emotions and more deliberative, self-conscious emotions (Giner-Sorolla 2001; Leary 2007). Hedonic emotions, such as excitement, joy, and sadness, are immediate in nature and elicited spontaneously without much cognitive elaboration. In contrast, self-conscious emotions, such as embarrassment, guilt, pride, and shame, are more deliberative in nature (Leary 2007). They are characterized by an awareness of the emotional state, cognitive elaboration, and self-reflection (Pham et al. 2001).

Embarrassment, in particular, is a pervasive emotion in the marketplace. People can go to great lengths to avoid feeling embarrassed or can engage in compensatory behavior to cope with embarrassment (Miller 1996). While researchers and practitioners alike recognize the adverse implications of embarrassment in consumption, research on embarrassment is still surprisingly sparse in the consumer psychology literatures (Krishna et al. 2019). Across three studies, we examine how cognitive resources and deliberation influence self-appraisal and resulting embarrassment, and suggest strategies for marketers to mitigate or manage consumer embarrassment.

In the first study (N = 203, 46.5% female; M_{age} = 37.5), we test whether encouraging consumers to deliberate on their experience increases embarrassment. We also examine a managerially relevant dependent variable: likelihood to recommend a product. We used a 2 x 2 between-subjects design with product (embarrassing vs. not embarrassing) and deliberation (high vs. low) as the two independent factors. Participants were told to imagine searching for and purchasing a hair regrowth treatment or a shampoo. Those in the deliberation condition were also instructed to take a moment to think about the scenario and elaborate on what they would be thinking (Gale et al.

1972). Next, all participants reported the intensity of embarrassment they would feel if they personally had this experience (embarrassed, uncomfortable, and ridiculous; Krishna et al. 2015; $\alpha = .95$) and their recommendation likelihood. Across all studies we included gender and familiarity as covariates consistent with prior research, (Dahl et al. 2001). Five participants were removed due to reading checks.

An ANCOVA with embarrassment as the dependent variable showed a significant main effect for product ($F (1, 192) = 38.44; p < .001$), a non-significant effect of deliberation ($F < 1$) and a significant interaction ($F (1, 192) = 4.11; p < .05$). For the embarrassing product purchase scenario, participants reported greater embarrassment when they deliberated ($M_{Embarrassing,HighDeliberation} = 3.60, M_{Embarrassing,LowDeliberation} = 2.89; p < .05$); however, there was no difference for the non-embarrassing product purchase ($F < 1$). An ANCOVA with recommendation likelihood revealed a similar effect, with participants seeing the embarrassing product *less* likely to recommend when they had deliberated ($M_{Embarrassing,HighDeliberation} = 3.63, M_{Embarrassing,LowDeliberation} = 4.62; p < .05$), but showing no difference for the non-embarrassing product ($F < 1$).

Per our conceptualization, embarrassment ensues following deliberation and self-appraisal in relation to a trigger incident. Therefore, limiting cognitive resources should lower self-appraisal, and ultimately, felt embarrassment. We tested this proposition in a second study ($N = 214$, 45% female; $M_{age} = 24.2$), using a 2 x 2 between-subjects design with product (embarrassing vs. not embarrassing) and cognitive load (high vs. low) as the two independent factors. Participants were involved in a purchase scenario similar to study 1 with a new set of products (incontinence vs. headache medication). Cognitive load was manipulated with an external memory task (Gilbert et al. 1995). We used the same embarrassment scale as in study 1; and also collected a 2-item measure of the extent to which participants consciously engaged in self-appraisal (e.g., "I would judge myself for this action"; $r = .85; p < .01$). In addition to gender and familiarity, we also included measures of need for cognition due to the cognitive nature of the task. Four participants were removed due to reading checks.

An ANCOVA with embarrassment as the dependent variable showed a significant main effect for product ($F (1, 203) = 85.47; p < .01$). The main effect of cognitive load and effects including gender were not significant (p's > .1). The two-way interaction between product and cognitive load was significant ($F (1, 203) = 6.54; p < .05$). Participants reported lower embarrassment under high (vs. low) cognitive load when purchasing the embarrassing product ($M_{Embarrassing-LowLoad} = 4.67, M_{Embarrassing-HighLoad} = 4.01; F (1, 203) = 6.73; p < .05$). However, there was no difference between the load conditions for the non-embarrassing product purchase ($p > .3$). We then tested the full moderated mediation model with Hayes' (2013) PROCESS macro with self-appraisal as the proposed mediator. As expected, we found a significant indirect effect of cognitive load on embarrassment through self-appraisal only when purchasing an embarrassing product (CI: -.014 to -.64), and not when the product was non-embarrassing (CI: -.06 to .45).

In study 3, we tested whether the choice task itself could act as a mental distraction when appraising a potentially embarrassing experience. Study 3 ($N = 182$, 40.3% female; $M_{age} = 40.03$) utilized one-way design of choice complexity (simple/dominant choice vs. simple/non-dominant choice vs. complex/non-dominant choice). We predicted that the more complex task would result in greater embarrassment. After indicating their product choice, participants completed the embarrassment and control measures. Three participants were removed due to reading checks.

An ANCOVA with embarrassment as the dependent variable showed a significant main effect for complexity $F (1,173) = 3.89; p < .05$. Participants in both the simple/non-dominant ($M = 3.18; t (1,173) = 1.96; p = .05$), and the complex/non-dominant choice conditions ($M = 2.96; t (1,173) = 2.73; p < .01$) reported lower embarrassment compared to participants who saw the dominant superior option ($M = 3.86$). These results showed support for our prediction that a mentally taxing evaluation process lowered cognitive resources and resulted in lower embarrassment.

Embarrassment is clearly an important emotion to understand, with much impact on everyday motivations and consumer behavior. Our work integrates extant research from psychology and more recent work from consumer behavior to better understand the processes triggering consumer embarrassment. Our results demonstrate ways of mitigating the negative consequences of consumer embarrassment through constraining deliberation on the experience, without losing from careful product evaluation.

To Show Off or To Shy Away: The Effect of Self-Conscious Emotions on Self-Checkout Usage

EXTENDED ABSTRACT

Purchasing certain products may threaten consumers' self-image, resulting in negative self-conscious emotions such as embarrassment. For instance, buying products such as condoms might elicit a strong feeling of embarrassment, especially when the purchase is made in the presence of others (Dahl, Manchanda, and Argo 2001). The emotion of embarrassment has been linked to a variety of consumer behavior, such as brand switching (Romani, Grappi, and Dalli 2012) and complaining about service failures (Wan 2013). To lower the overall anticipated embarrassment, shoppers put more non-embarrassing items into their shopping baskets to cover up embarrassing purchases or to balance the basket (Blair and Roese 2013; Brackett 2004).

Recent innovations such as self-checkout technologies allow shoppers in physical stores to checkout without having to interact directly with a human cashier. Consequently, the option of self-service checkout may provide consumers with a means to avert others' attention, hence reducing their feelings of embarrassment.

When a shopper buys a product that s/he deems embarrassing and chooses whether to pay at a human counter or at a self-checkout counter, the motivation to avoid social contact (e.g., interacting with a cashier) will be stronger when the embarrassing product is more salient. Because the degree of salience of the embarrassing purchase is reduced by an increase in basket size—the total number of items in a basket, people should be less motivated to use self-checkout when the basket size becomes large. The tendency of using self-checkout for larger baskets would be further reduced by the greater effort required to scan all purchases at a self-service machine. Thus, we predict that consumers who purchase embarrassing products are more likely to choose self-checkout over a human cashier, but this preference would be more pronounced for smaller baskets and attenuated for larger baskets.

In contrast with embarrassing products that potentially threaten one's self-image, some purchases may project a positive self-image. For example, buying organic products is typically associated with being health-conscious or wealthy. People in general have a desire to portray a positive self-image (Tepper 1994). If self-image considerations indeed influence shoppers' preference of checkout options, shoppers with organic products in their baskets would show an opposite pattern to those who purchase embarrassing products. That is, shoppers who purchase organic products would prefer human

checkout. We also expect shoppers' preference for human checkout when buying organic products to attenuate when they have larger baskets, because the salience of the organic item(s) would decline with a larger basket.

To test our hypotheses, we analyzed a panel dataset from a supermarket chain with both human checkout and self-service checkout counters. This dataset includes seven weeks of receipt-level transaction information at three different stores, with a total of 223,585 transactions. We found that baskets with embarrassing products contained on average 0.7 more items ($M = 5.01$, $SD = 6.59$, excluding the embarrassing item(s)) than non-embarrassing baskets ($M= 4.32$, $SD = 5.14$, $t(223,580) = 2.21$, $p = .02685$). This result is consistent with past research showing that consumers buy more items to cover up their purchase of embarrassing products (Brackett 2004; Lewittes and Simmons 1975).

Next, we conducted logistic regressions with the choice between self-service checkout and human checkout as the dependent variable. We focused our analysis on transactions paid with credit or debit cards (126,144 transactions) because the self-service checkout machines could not accept cash. The key predictors included whether a basket contained condoms (an embarrassment dummy = 1 for baskets containing condoms, and = 0 otherwise). Further, the choice of checkout counters could also be driven by convenience (human cashier provides service) and time-saving (due to store traffic) considerations; therefore, we controlled for these and other competing factors. Thus, we included control variables such as the week, the day of the week, the hour, the store, whether a membership card was swiped, the number of open human counters at the time of the transaction, and basket size.

Our model also included a threshold dummy for salience – the number of items in a shopping basket beyond which our proposed effects of condom or organic purchases are no longer observed. The dummy was coded as 1 when the basket size was smaller than the threshold, and 0 otherwise. To determine the threshold, we varied the threshold from 1 to 10 and picked the value (five) that offered the best fit to the data.

The logistic regression using five as the threshold reveals that for baskets with condoms, shoppers were more likely to select self-service checkout compared to those who did not purchase condoms, such that the odds of choosing self-service checkout was about 1.81 times higher if a shopper bought condoms than if s/he did not buy condoms ($b = 0.5943$, $t = 2.3527$, $p = .0186$). When the baskets with condoms contained five or more items, the effect of buying condom was significantly reduced ($b = -1.0799$, $t = -3.1067$, $p = .0019$).

Using whether a basket contained organic products (a positive-image dummy = 1 for baskets containing organic products, and = 0 otherwise) as the key predictor, we found that shoppers with one or more organic products in their baskets were *less* likely to choose self-service checkout compared with shoppers who did not buy any organic products ($b = -.1748$, $t = - 3.5251$, $p = .0004$, odds ratio was only 0.84 times of the odds ratio for purchases not including organic items). However, this preference for human checkout (vs. self-service checkout) was reduced when the baskets contained five or more items ($b = .1491$, $t = 2.4303$, $p = 0.0151$,), mirroring the results for baskets containing condoms. This pattern is consistent with our argument that with a larger basket, the organic product(s) would be less salient and thus less likely to communicate a positive image, resulting in shoppers' lower motivation to "show off."

Taken together, our results suggest that self-conscious emotions can exert powerful influences on shopping behavior. Our findings have rich implications for marketing practitioners regarding store-space planning, self-service technology design, product packaging (e.g., conspicuousness of the enclosed item), and service-process design.

The Fighter and the Caregiver: Brands that Help Individuals with Self-Esteem and Social Exclusion Threats

EXTENDED ABSTRACT

Over the last 20 years, top journals in marketing and psychology have published approximately 800 articles on self-esteem (the fear of not being up to one's expectations) and social exclusion (the fear of being socially impaired) threats, establishing the importance of research on this topic. In this paper, we investigate how brands can mitigate these threats.

When self-esteem is threatened, individuals activate a problem-focused coping strategy to mitigate the effects of self-esteem threats (Han, Duhachek, and Rucker 2015). They need someone to fight for them (but not emotionally take care of them; Strelan and Zdaniuk 2015), to combat, to positively change the situation. In a branding context, a fighter brand would be one with a strong sense of justice and loyalty, who is ready to fight for consumers' rights (Hartwell and Chen 2012). In this paper, we expect a fighter brand to mitigate the effects of self-esteem threats:

Hypothesis 1a   *Individuals exposed to self-esteem threats (vs. social exclusion, no-threat) prefer fighter brands.*

Hypothesis 1b   *The effect of self-esteem threat on preference for fighter brands is mediated by problem-focused coping.*

When individuals experience social exclusion threats, a "caregiving emptiness" is created (Twenge et al. 2007). Consequently, individuals use emotional-coping strategies to cope with social exclusion threats (Han et al. 2015). These individuals need support from others to cope with social exclusion. They need to rely on things that can provide care to them. A person experiencing social exclusion is less likely to approach others or fight and would typically expect a caregiver to provide social support (MacDonald and Leary 2005). In a branding context, a caregiver brand would be one taking care for the consumer, nurturing her, or her wellbeing. In this paper, we expect a caregiver brand to mitigate the effects of social exclusion:

Hypothesis 2a   *Individuals who experience social exclusion threat (vs. self-esteem threat, no-threat) prefer caregiver brands.*

Hypothesis 2b   *The effect of social exclusion threat on preference for caregiver brands is mediated by emotion-focused coping.*

In **study 1**, we investigated the kind of brands individuals prefer when they are threatened. Initially, we asked participants to think of an event that made them feel psychologically threatened (social exclusion and/or low self-esteem). Next, we asked them to think of a brand that would provide them some kind of psychological relief. We then asked the participants the extent to which a brand should have any of our listed traits to provide them with psychological relief. The results of the exploratory factor analyses suggest two main factors, which we named "the fighter" and "the caregiver".

In **study 2**, we tested H1a and H2a, in a behavioral experiment using real choice situation. Participants were first randomly assigned to self-esteem threat, social exclusion threat, or no threat.

We next told participants that we would like to offer them a pack of tea bags as a reward for their participation, among four new brands: Brand A (positioned as a caregiver), Brand B (positioned as a fighter) and Brand C (mix) and D (none), used as control. We then asked participants to choose one tea bag to take with them.

As predicted, when individuals experienced self-esteem threats, they chose a fighter brand (53.33%) more than a caregiver brand (13.33%; z = 6.44, *p* < .001), or control brands (mix: 23.33%; z = 3.89, *p* < .001; none: 10.00%; z = 7.91, *p* < .001). Individuals who experienced social exclusion threat chose the caregiver brand (54.84%) more than the fighter brand (19.35%; z = 5, *p* < .001), or control brands (mix: 19.35%; z = 5, *p* = .007; none: 6.45%; z = 10.97, *p* < .001).

In **study 3**, we tested all hypotheses together. We used a 2 (threat: self-esteem, social exclusion) by 2 (brand: fighter, caregiver) between-subjects design. We next measured the problem-focused and emotion-focused coping scale (Han et al. 2015). Participants were then introduced to a separate study where they indicated their brand preference.

As predicted, when participants were exposed to social exclusion threats, they preferred more caregiver brands ($M_{socialexclusion-caregiver}$ = 4.355, $SD_{socialexclusion-caregiver}$ = .717 vs. $M_{socialexclusion-fighter}$ = 3.732, $SD_{socialexclusion-fighter}$ = 1.078; *t* = 2.606, *p* = .013). Analogously, when participants were exposed to self-esteem threat, they preferred more fighter brands ($M_{selfesteem-fighter}$ = 4.283, $SD_{selfesteem-fighter}$ = .906 vs. $M_{selfesteem-caregiver}$ = 3.648, $SD_{selfesteem-caregiver}$ = .897; *t* = 2.606, *p* = .01).

The mediation analysis results showed a significant effect (CI: 95% = [.062; .414]) of emotion-focused coping on brand preference, moderated by brand positioning as caregiver. Moreover, the mediation analysis results showed a significant effect but only at the 90% level of confidence (CI: 90% = [.097; .492]) of problem-focused coping on brand preference, moderated by brand positioning as fighter.

In **study 4**, we tested all the hypotheses together, using real consumption. We used a 2 (threat: self-esteem threat, social exclusion threat condition as in study 3) by 2 (brand positioning: fit, non-fit, adapted from study 3) between-subjects design.

After being exposed to the threat, participants were asked to consume at least 250 ml of tea (as a separate market test). In the fit brand condition, they read a communication that described the brand as caregiver (vs. fighter or control) if exposed to social exclusion threat, or a communication that described the brand as fighter (vs. caregiver or control) if exposed to self-esteem threat. Next, participants completed the problem-focused and emotion-focused coping scale on how they would have dealt with the threatening situation they described before now (i.e., after the consumption).

As predicted, there was an interaction of the effect of threat (self-esteem vs. social exclusion) and brand positioning (fit, non-fit) on ratings for emotion-focused coping (F (1, 111) = 4.951, *p* = .003) and for problem-focused coping (F (1, 111) = 4.321, *p* = .04).

In this paper, we provide convergent evidence that individuals prefer, express more positive attitudes, and choose different types of brands (i.e., fighter or caregiver) depending on the psychological threat (i.e., social exclusion or self-esteem) they experience.

Attitudes Based on Feelings: Fixed or Fleeting?

EXTENDED ABSTRACT

Companies measure consumers' opinions so as to predict consumers' judgments and behavior in the future. This is based on the assumption that the attitudes consumers express at any given time are at all related to their attitudes when making future judgments or purchasing decisions. Indeed, attitudes are often presumed to be relatively consistent across time and the very definition of an attitude is an evaluation that is *stored in memory*, and therefore relatively long-lasting (Fazio 2007). Despite this assumption, research indicates that whereas some attitudes are fixed, others are as fleeting as the time it takes consumers to complete their survey (Schwarz 2007; Tormala and Rucker 2018). How can companies know which attitudes are fixed versus fleeting?

Emerging research suggests that an attitude's longevity may stem partially from whether that attitude is based on consumers' feelings. On the one hand, feelings can be rather ephemeral in nature. They exist in the moment and then disappear. Reflecting this viewpoint, research has shown a nearly singular focus on elaborative – i.e., thoughtful – processes as particularly responsible for generating strong, long-lasting attitudes (e.g., Haugtvedt and Petty 1992). On the other hand, there is growing research that attitudes based on feelings are rather strong: they are quick to come to mind, less dependent on context, and more predictive of behavior (Lavine et al. 1998; Rocklage and Fazio 2016, 2018). This has been shown to be particularly true of positive attitudes. These findings are supported by theorizing that an emotional, feelings-based reaction provides a consumer with a strong signal of his or her attitude, thereby leading to an attitude stored more strongly in memory (Fazio 1995).

Across six longitudinal studies, we examine whether attitudes based on feelings and emotional reactions are longer-lasting. In Studies 1a and 1b, we measured consumers' attitudes toward Christmas gifts. On the day after Christmas in 2016 and 2017, we asked participants to provide the names of three gifts they had just received. We measured the valence and emotionality of their attitudes for each gift using the Evaluative Lexicon (EL; Rocklage and Fazio 2015) both initially and again one month later. Following common practice, we calculated the stability of each attitude as the absolute difference between the valence of their attitude at each timepoint (Luttrell, Petty, and Briñol 2016).

Results are similar across both studies and thus collapsed together. Linear mixed-modeling revealed that that the more a consumer's initial attitude was based on emotion, the longer-lasting that attitude was one month after Christmas. In line with past work, this was particularly true of positive attitudes and non-significant for negative. These results held above how extremely positive or negative their initial attitude was, thereby specifying the effect of emotionality per se.

In Studies 2a-2c, we utilized a similar design, but used a large sample of 40 diverse brands that varied greatly in their normative valence as well as hedonic and utilitarian nature. Using the EL, consumers provided their attitudes toward 10 randomly-selected brands both initially and one month (Studies 2a and 2b) or two weeks later (2c). To examine emotionality's unique effect, Studies 2b and 2c also included measures of other constructs associated with attitude strength: subjective ambivalence, certainty, and subjective knowledge (Visser, Bizer, and Krosnick 2006).

Results are similar across studies and thus collapsed together. Linear mixed-modeling revealed that the more an attitude was based on emotional reactions, the longer-lasting it was. This was again particularly true of positive attitudes, and non-significant for negative. These results held above ambivalence, certainty, knowledge, and valence extremity. We also found that although consumers can accurately predict which of their attitudes are longer-lasting, the emotionality of their attitude is unrelated to these predictions – consumers appear unaware of emotionality's effect.

In Study 3, we examined whether the emotion conveyed in consumers' first online review of a business predicted the change in those consumers' evaluation in their later review of that same business. We scraped all Yelp.com restaurant reviews in Chicago, Illinois starting with the very first Yelp review in 2005 up to 2017. Yelp provides consumers the ability to review a restaurant as many times as they visit that restaurant. Thus, we measured both consumers' initial evaluation and its emotionality as well as their evaluation when they wrote an additional review of the same restaurant. There were 75,706 reviews across 18,786 consumers. To quantify consumers' evaluations, we calculated the absolute difference between their initial and additional review's 1) star rating and, separately, 2) valence of the text as quantified by the EL. We followed past research and quantified reviewers' emotionality based on their most emotional positive and negative reactions (Rocklage, Rucker, and Nordgren 2018).

Given the previous effects for positive attitudes, we first examined the extent to which reviewers expressed relatively more positive emotionality (positive minus negative emotionality). Linear mixed-modeling revealed that for both star ratings and text valence, the more positive (vs. negative) emotion consumers had initially, the less their evaluation changed across time. These results held above how extremely positive (vs. negative) their initial evaluation was. These results replicated when entering positive and negative emotionality as separate predictors in each model – positive emotionality was the only consistent predictor of greater longevity.

Across six longitudinal studies, we found that the more an attitude is based on consumers' emotional, feelings-based reactions, the longer-lasting it is – months or even years later. Moreover, consumers appear unaware of emotionality's effect. In sum, not all attitudes are created equal and it would benefit marketers to pay particular attention to those attitudes based more versus less on emotion.

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We Can "Feel" the Presence: Persuasion Dynamics of Technology-Mediated Social Presence in Consumer-Firm Interactions

Chairs: Ana Valenzuela, Baruch College, USA
Christian Hildebrand, University of Geneva, Switzerland

Paper #1: Detrimental Trust in Automation: How Conversational Robo Advisors Leverage Trust and Mis-Calibrated Risk Taking
Christian Hildebrand, University of Geneva, Switzerland
Anouk Bergner, University of St. Gallen, Switzerland

Paper #2: Getting Personal in Public? How Consumers Respond to Public Personalized Advertisements
Nicole Jasmin Heß, Ludwig-Maximilians-University of Munich, Germany
Corinne M Kelley, Florida State University, USA
Maura Scott, Florida State University, USA
Jan Schumann, University of Passau, Germany
Martin Mende, Florida State University, USA

Paper #3: Distant Connection: Differences in Prosocial Behavior Across Computing Devices
Caglar Irmak, University of Miami, USA
Claudia Townsend, University of Miami, USA
Ben Bornstein, University of Miami, USA

Paper #4: The Persuasive Power of Online Social Presence
Rahi Hosseini, Pompeu Fabra University, Spain
Maria Galli, ESADE Business School, Spain
Ana Valenzuela, Baruch College, USA

We Can "Feel" The Presence: Persuasion Dynamics of Technology-Mediated Social Presence in Consumer-Firm Interactions

SESSION OVERVIEW

Social presence signals "access to another intelligence" in technology-mediated interactions (Biocca 1997) and is sometimes described as the degree to which the other is perceived to be a real person (Gunawardena and Zittle 1997), acting with agency and "intention" (Biocca, Harms, and Burgoon 2003). The attribution of social presence has been shown to positively affect user attitudes towards telecommunication exchanges, as it implies agency and intent behind the communication (Sallnäs, Rassmus-Gröhn and Sjöström 2000; Skalski and Tamborini 2007). Studies have demonstrated that feelings of social presence can motivate participant engagement (e.g., increased student participation in online courses; Picciano 2002) and improve performance on related tasks (e.g., solving a jigsaw puzzle with a remote other; Giannopoulos et al. 2008). Reversely, remote communications lacking in social presence are perceived to be impersonal, reducing information sharing with others (Leh 2001).

The four papers in this special session collectively address two central questions on technology-mediated social presence: (1) How and via which mechanism new technologies induce perceptions of social presence in both human-to-human and human-computer interaction? (2) What are the downstream consequences of technology-mediated social presence on economically relevant consumer outcomes? Hildebrand and Bergner show that conversational robo advisors can lead to miscalibrated risk-taking in financial decisions, enhancing the likelihood to accept even objectively incorrect portfolio recommendations compared to non-conversational robo advisors. In the second paper, Hess, Kelley, Scott, Schumann, and Mende explore the unintended consequences of personalized advertising, showing the detrimental effect of personalized ads on self-concept threat and enhanced feelings of embarrassment. In the third paper, Bornstein, Townsend and Irmak turn to pro-social calls for action, demonstrating that mobile technologies can lead to greater prosocial behaviour by making distant others feel close. Finally, Hosseini, Galli and Valenzuela focus on the persuasive power of perceptions of social presence in online reviews, which facilitates the imagination of a potential social interaction that elevates attitudes towards reviewers and subsequent word-of-mouth.

Together, the set of papers incorporates an expansive breadth of tech/contextual richness, ranging from robo advisors (Papers 1), in-store beacons (Paper 2), online campaigns and consumer reviews (Paper 3 and 4). Each paper also demonstrates novel mechanisms on how technology-mediated presence affects consumer decision making, including the role of affective and cognitive levels of trust (Paper 1), the role of discrete emotions (such as embarrassment) (Paper 2), how mobile technologies can induce feelings of closeness (Paper 3), or fundamental changes in attitude perceptions through facilitated visualization of the social exchange (Paper 4). All papers are in advanced stages of completion with multiple studies run.

The progressive approaches and novel results in this session are sure to induce a lively discussion and are likely to appeal not only to researchers interested in consumer-tech engagement, but to a broader audience interested in consumer-firm interactions and consumer interactions with technology more generally.

Detrimental Trust in Automation: How Conversational Robo Advisors Leverage Trust and Mis-calibrated Risk Taking

EXTENDED ABSTRACT

Robo advisors have been praised as the next operating system in finance and the "new wealth management interface of the 21st century" (Andrus 2014), enabling an entirely automated process of investment advisory from assessing clients' financial goals and risk profile, to ultimately managing their portfolio.

Research on the impact of these novel forms of financial advisory has largely focused on factors related to their general acceptance, the design aspects of the interface (Kilic, Heinrich, and Schwabe 2015), and the role of cost transparency (Nussbaumer et al. 2012). Very little is known about how these interfaces may fundamentally change consumers' experience of the advisory process and impact their perceptions of the financial services firm, as well as the downstream consequences for consumers.

The current work explores an emerging variation in modalities among robo advisors, and provides a conceptualization based on prior work on speech patterns and the formation of trust through turn-taking in human-to-human dialogue (Sprecher et al. 2013). In three experiments, we show that dialogue-based, conversational robo advisors cause greater levels of affective and cognitive trust compared to non-conversational robo advisors, resulting in a more benevolent evaluation of the financial services firm, which can lead to detrimental consequences for consumers, such as selecting objectively incorrect portfolio recommendations or accepting costly investment products.

Study 1 was designed to test our hypothesis of whether conversational as opposed to non-conversational robo advisors cause greater levels of affective and cognitive trust, and whether these changes in trust trigger the predicted increase in benevolence attributions. We built a native robo advisor using the flowXO technology, mimicking the characteristics of actual conversational robo advisors across financial markets. A total of 101 active private investors (i.e., having a portfolio with a financial service provider or bank) were recruited through a European market research agency (M_{Age}=36.57, SD_{Age}=11.59, 36% females) and randomly assigned to either a conversational or a non-conversational advisory interface. Participants in the non-conversational condition answered a series of ten questions related to their current financial situation, goals, and perception of risk via a traditional risk assessment questionnaire (Hanna, Gutter, and Fan 2001), while those in the conversational robo advisory condition answered the same series of questions in the exact same order but provided their answers in a chat console at the bottom of the interface. Participants subsequently received a matching financial portfolio based on their current risk profile. We then assessed participants' level of affective and cognitive trust toward the robo advisory interface (Johnson and Grayson 2005, sample item affective trust: "I felt that the system cares about listening to my financial situation to help me.", $\alpha_{TrustAff}$=.88; sample item cognitive trust: "I truly doubt the competence of the advisory system. (reversed)", $\alpha_{TrustCog}$=.85), and their perception of benevolent intentions of the financial services firm (Schlosser et al. 2006, sample item: "It doesn't seem that this financial services firm would knowingly do anything to hurt me.", $\alpha_{FirmBenevolence}$=.86). In line with our prediction, we found that consumers attributed a significantly greater level of affective trust toward the conversational robo advisory interface compared to the non-conversational interface ($M_{Conversational}$=4.62, $M_{NonConversational}$=3.35, t(99)=4.425, p<.001), as well as a significantly greater level of cognitive trust ($M_{Conversational}$=4.64, $M_{NonConversational}$l=4.10, t(99)=2.382, p<.05). Furthermore, consumers attributed significantly greater benevolence toward the financial services firm when using the conversational as opposed to non-conversational interface ($M_{Conversational}$=4.27, $M_{NonConversational}$=3.75, t(99)=2.384, p<.05). We observe comparatively larger effect sizes for affective compared to cognitive levels of trust (Cohen's $d_{TrustAff}$=.89, Cohen's $d_{TrustCog}$=.48) and show that both produce directionally consistent but statistically separable effects on perceptions of benevolence (95% $CI_{ParallelMediation}$ of indirect effect [.44; 1.12]).

Studies 2 and 3 further explored the potentially detrimental consequences of more benevolent attributions on consumers' downstream decisions. Specifically, Study 2 explores whether increased levels of cognitive and affective trust make consumers more likely to accept an objectively incorrect portfolio recommendation that is inconsistent with their actual risk profile. Replicating Study 1, we systematically altered the recommended portfolio so that risk-averse investors received more aggressive portfolio recommendations whereas risk-seeking investors received a recommended capital-preserving portfolio. All other procedures were identical to Study 1 and we used the same scale items to assess the level of affective trust ($\alpha_{TrustAff}$=.94), cognitive trust ($\alpha_{TrustCog}$=.90), and benevolence of the firm ($\alpha_{FirmBenevolence}$=.93). A total of 154 private investors (M_{Age}=34.57, SD_{Age}=10.62, 33.7% females) participated in this study (same pre-screening criteria as Study 1). Even though the recommended portfolio was entirely opposite to consumers' risk profile, we observe only a moderate adjustment in cognitive trust and a marginal significant difference between both robo advisor conditions ($M_{Conversational}$=4.25, $M_{NonConversational}$=3.84, t(152)=1.692, p=.09), while the findings on affective trust were

unaffected ($M_{Conversational}$l=4.78, $M_{NonConversational}$=3.24, t(152)=5.662, p<.001). Furthermore, the findings on benevolence mirrored those on affective trust and replicated the pattern of parallel mediation revealed in Study 1. Finally, we found that while 60% of consumers in the non-conversational advisory condition adequately adjusted their recommended portfolio only 26.6% did so in the conversational robo advisor condition ($\chi^2_{(1)}$=17.54, p<.001). This effect was robust across risk-averse and risk-seeking consumers.

Study 3 further extends these findings across a broad range of investment decisions (such as selecting among a specific percentage of active to passive investments) and shows that these effects persist even when consumers are exposed to a disclaimer highlighting the potential financial interest of the firm.

To the best of our knowledge, this is the first work that contrasts the effects of traditional, non-conversational compared to conversational, dialogue-based robo advisor interfaces. This research contributes to the emerging field of immersive consumer experiences and shows that the turn-taking interaction paradigm of conversational robo interfaces evokes more affective experiences when making financial decisions. The findings of this work have important policy and managerial implications in terms of consumer welfare and financial regulation.

Getting Personal in Public? How Consumers Respond to Public Personalized Advertisements

EXTENDED ABSTRACT

Personalized advertising is well-established in settings where consumers shop in private (e.g., online). However, retailers are now expanding personalized advertising into consumers' public life (e.g., via digital in-store displays) (Roggeveen and Sethuraman 2018). For example, state-of-the-art in-store technology allows retailers to screen visible consumer attributes (e.g., their gender, age, body-mass-index, emotional state) and to display corresponding personalized content. Little research has examined how consumers respond to such personalized advertising in public.[1] Grounded in theory on impression management and self-concept, we examine how consumers respond to public personalized advertising. Three experiments assess when and why social presence and configurations of ad-self-concept congruity affect consumer responses positively or negatively.

Because personalized public ads are visible to others, social presence—i.e., the real, implied, or imagined presence of others (Latané 1981)—may alter how consumers respond to personalized ads. That is, consumers may consider public personalized ads as a self-presentation tool if these ads address certain identity appeals (e.g., Thomas et al. 2015). We suggest that consumers, when they receive a personalized ad, experience impression management concerns and have less favorable attitudes when others are present; however, this effect will be attenuated when the ad is not personalized.

To test our theorizing, Study 1 employed a 2(social presence: no, yes) × 2(personalized advertisement: no, yes) between-subjects design. One hundred seventy-six undergraduate students (84 females, M_{Age} = 20) read about a retail shopping experience in which they encounter an advertisement on a screen prominently

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1   Notably, prior research has examined personalization techniques in online marketing (e.g., Bleier and Eisenbeiss 2015; Schumann et al. 2014). However, these studies focused on personalized ads that consumers received *in private*; thus, the corresponding findings may not generalize to personalized ads that target consumers *in public*.

displayed in the store. Social presence was manipulated by having other shoppers present or not, both in the description and images used. We manipulated personalization by describing the scanning technology as being personalized (or omitting this information). We found significant interaction effects of personalization and social presence on attitude toward the retailer ($p = .04$). To explain the significant two-way interaction, we examined effects at each level of personalization. When the ad is *personalized*, consumers are less favorable toward the retailer when there is social presence ($M_{SocialPresence} = 3.98$ vs. $M_{NoSocialPresence} = 4.77$; $p = .01$); this effect is attenuated when the ad is *not personalized* ($M_{SocialPresence} = 5.38$ vs. $M_{NoSocialPresence} = 5.21$; $F < 1$). We see the same significant pattern of effects on behavioral (purchase) intentions toward the retailer.

Next, drawing on research on self-concept congruity (Sirgy et al. 1997) and social identity threat (White and Argo 2009), we develop a fine-grained account for how the congruity between the ad and the consumers' self-concept influences consumer response, thereby expanding prior conceptualizations of ad-self-concept congruity (e.g., Hong and Zinkhan 1995). Specifically, we examine the moderating role of whether the ad's appeal is bolstering or threatening, as well as the moderating role of congruity between the ad and the consumer's self-concept (high vs. low ad-self-concept congruity). Accordingly, Study 2 employed a 2(social presence: yes, no) × 2(ad type: bolstering, threatening) × measured (ad-self-concept congruity) between-subjects design. Three hundred and eighty-seven students (140 females; $M_{Age} = 21$) participated. Participants rated the shade of their own teeth using a scale that displayed a range of different tooth shades, which enabled us to provide participants with a personalized advertisement, designed based on the condition of their own teeth, later in the study. Then, participants read a shopping scenario about encountering a personalized in-store advertisement promoting dental products. We manipulated social presence in the scenario description and images used. We find the predicted three-way interaction ($p = .04$). Results show a difference in the impact of presence of others on shoppers across different advertising appeal types and varying levels of consumers' perceived ad-self-concept congruity on behavioral intentions. Presence of others (vs. no presence) reduces favorable intentions toward the retailer ($M_{SocialPresence} = 5.09$ vs. $M_{NoSocialPresence} = 5.52$; $p < .10$) and increases embarrassment ($M_{SocialPresence} = 4.12$ vs. $M_{NoSocialPresence} = 3.40$; $p = .03$) when the personalized advertisement is threatening and considered to have high ad-self-concept congruity. Consumers' negative response toward the retailer in the social presence of others is mediated by increased embarrassment (95%, CI [-.2531 to -.0058]).

Study 3 replicates the mediating role of embarrassment but also reveals the mediating role of flattery. We manipulate ad-self-concept congruity and employ a 2(social presence: yes, no) × 2(ad type: bolstering, threatening) × 2(ad-self-concept congruity: low congruity, high congruity) between-subjects design. Four hundred and thirty-six students (212 females; $M_{Age} = 20$) participated. Participants were randomly assigned to one of eight conditions, in which they read about a retail consumer encountering a personalized advertisement; the personalized advertisement was derived from a tooth scan, similar to Study 2. We find a difference in the impact of presence of others on shoppers across varying ad-self-concept congruity states, revealing a significant three-way interaction on attitude toward the retailer ($p = .03$). Presence of others decreases positive attitudes toward the retailer ($M_{SocialPresence} = 4.23$ vs. $M_{NoSocialPresence} = 4.57$; $p = .08$) and increases embarrassment ($p = .02$) when the personalized advertisement is threatening and considered to have ad-self-concept congruity. Moreover, the presence of others increases flattery when the personalized advertisement is bolstering

and considered to have ad-self-concept congruity ($M_{SocialPresence} = 4.58$ vs. $M_{NoSocialPresence} = 4.04$; $p = .01$). Consumers' negative response to personalized ads in the social presence of others is mediated by increased embarrassment (95%, CI [-.2410 to -.0400]). Consumers' positive response to personalized ads is mediated by increased flattery (95%, CI [.0015 to .1207]).

Our work expands research on personalized advertising by providing evidence of how social presence impacts individuals when they are exposed to personalized content. Further, we reveal the relevance of four novel sub-types of in-/congruity (threatening ad-self-(in-)congruity vs. bolstering ad-self-(in-)congruity), which demonstrates the importance of examining the direction (i.e., valence) of ad-self-(in-)congruity; an insight new to consumer research.

Distant Connection: Differences in Prosocial Behavior across Computing Devices

EXTENDED ABSTRACT

Consumer charitable giving is rapidly becoming digitalized and prior research suggests that consumers tend to make higher charitable contributions when online versus offline (Network for Good 2006; Harrison-Walker and Williamson 2000). The current research aims to delve deeper into online donation behavior to determine how prosocial intention varies according to whether consumers are solicited for help while interacting with a mobile (e.g., laptop) versus stationary (e.g., desktop) computing device. Most research in consumer behavior on mobile devices focuses on the effects of touch screens (e.g., Shen, Zhang, and Krishna 2016) and screen size (e.g., Kim and Sundar 2014). However, our work operates under the assumption that these factors are held constant and emphasizes a different contrast between mobile and stationary devices: The potential for physical movement.

Mobile device users are theorized to operate in a wide-open world where the social distinction between public and private is blurred, while desktop users literally and figuratively turn their back to the world and operate in a confined social bubble (Traxler 2011). Thus, stationary and mobile device users may develop different perceptions of socially close and distant others. We propose that when compared to stationary device usage, mobile device usage will decrease (increase) the perceived psychological distance between a donor and a socially distant (close) benefactor. Social and spatial psychological distance are interrelated and perceived relative to an egocentric reference point (Maglio, Liberman, and Trope 2013). Thus, when a device enables unrestricted (restricted) spatial mobility, the egocentric reference point for social distance should shift towards distant (close) others. By reducing the psychological distance between a donor and benefactor, emotional connection increases, and prosocial behavior increases in consequence (Loewenstein and Small 2007). Yet, as connection to psychologically distal others increases, connection to psychological close others decreases in tandem (Williams and Bargh 2008). In sum, the current research hypothesizes and shows that a mobile (stationary) device user will experience more connection to and consequently be more likely to help socially distant (close) others. We examine this effect of device mobility on prosociality across three studies.

Study 1 holds device type constant and tests the effect of mobility on prosociality towards strangers. In a correlational study among laptop users, we first measure participants' current state prosocial behavior towards strangers by asking them to answer the 10-item (a = .88) Altruistic Personality Scale (Rushton, Chrisjohn, and Fekken 1981) adapted to emphasize current state (versus trait)

using a 7-point scale (1 = "Not at all likely", 7 = "Very likely"). We then measure how often participants move their device (1 = "Never", 7 = "All the time"). There is a positive correlation between prosocial behaviors towards strangers and device movement ($r(214) = .22$, $p = .001$).

While in study 1 we held device constant and measured mobility, in study 2 we examine differences between devices (laptop versus desktop) and how ability to move these devices then influences prosocial behavior towards socially close versus distant others. Further, we find evidence for the proposed underlying process that potential for device movement increases perceived connection with far others. We also rule out alternative explanations including mode of device interaction (e.g., touching a screen), screen size, closeness to screen, visual clarity of screen, operating system, enjoyment, computer knowledge, and personal connection to device. Following the device specific questions, we measure perceived connection to both far and close others. We then measure prosociality towards strangers using the Altruistic Personality Scale from study 1. Lastly, we examine differences in choosing to help friends versus strangers versus selves through a hypothetical donation allocation plan of $100.

After controlling for all other alternative process measures, we find a positive correlation between prosocial behaviors towards strangers and device mobility (laptop = 1; desktop = 0) ($r(136) = .25$, $p = .003$). Moreover, we find serial mediation through device movement and connection with far others (indirect effect = .054; 95% confidence interval = [.003, .164]). There was no evidence of serial mediation through device movement and connection with close others (indirect effect = .00; 95% confidence interval = [-.003, .032]). When choosing between helping friends versus strangers, an interaction emerged in which laptop (desktop) users donated more to strangers (friends) ($M_{diff} = 6.33$; SE = 2.15; $F(1, 133) = 8.67$, $p = .004$). There was no difference between devices in allocating money to help others versus keep for oneself ($F < 1$).

Study 3 replicates the interaction in study 2 through a controlled experimental between-subjects 2 (Device: Mobile vs. Stationary) X 2 (Social Distance: Close vs. Distant) design. We randomly assign participants to either take the study on a laptop or desktop computer. Participants rated their likelihood of helping either a next-door neighbor or distant stranger whose car is broken down. An ANOVA on this prosocial behavior revealed only a main effect of the benefactor's social distance ($F(1, 184) = 120.91$, $p < .001$) and an interaction of device X social distance ($F(1, 184) = 17.96$, $p = .009$). Among participants asked to help a socially distant benefactor, helping behavior was higher for laptop users ($M = 3.30$; SD = 1.74) than desktop users ($M = 2.64$; SD = 1.55; $F(1, 184) = 4.00$, $p = .047$). Among participants asked to help a socially close benefactor, desktop users ($M = 5.82$; SD = 1.56) were marginally more likely to help than laptop users ($M = 5.25$; SD = 1.53; $F(1, 184) = 3.06$, $p = .082$).

Together these studies reveal that using a mobile versus stationary device can alter prosocial intentions. We show that mobile (stationary) device users are more likely to help socially distant (close) others. These results offer both practical (e.g., location-based targeting for non-profit fundraising) and theoretical (e.g., mobile versus stationary device usage and perceptions of psychological distance) implications.

The Persuasive Power of Online Social Presence

EXTENDED ABSTRACT

Online reviews are an inseparable and influential part of the purchase process. They are used by 93% of US consumers to determine an enterprise quality with positive reviews encouraging consumers to engage with a business 68% of the time (BrightLocal, 2017). Thus, effective review management is paramount for market success (Mayzlin et al., 2014; Erskine, 2017; Wang et al., 2018). The research on WOM (word of mouth) has studied reviews as a form of static communication by characterizing attributes that contribute to the perceived helpfulness of reviews (e.g., Cheung & Thadani, 2012; Hong et al., 2017; King et al., 2014). In this research, we examine online reviews as a quasi-face-to-face social interaction, focusing on "social presence" as a psychological phenomenon conductive to effectiveness of online reviews (Baym, 2015). Social presence is defined as "the degree of salience of the other person in the interaction […]" (Short et al., 1976), or, more simply, as "the sense of being with another" (Biocca et al., 2003). We propose that when reading an online review, consumers feel as in the company of the reviewer and engage in an imaginary social interaction with them. As this imagined social interaction becomes more vivid, and the "sense of being with" the reviewer becomes stronger, the consumer's attitude toward her/him becomes more favorable, which increases recommendation acceptance. Four experiments test our hypotheses:

In experiment-1, participants (156 students; 72 women; 85% 18-24 years old) had to place an order for Starbucks VIA instant coffee using a coffee-ordering application, named CooCa. The app first showed the four available flavors: Chocolate, Caramel, Vanilla, and Spice, and then provided "CooCa's recommended coffee of the day," which was a randomly selected review by an unknown coffee enthusiast. Social presence was manipulated by varying the review's narrative style (as in Zhou et al., 2004): first-person (high) vs. objective (low) narrative style. Participants then indicated the likelihood of ordering the coffee featured in the review one a seven-point likelihood scale. A seven-item and a two-item scale were used to measure social presence (Gefen & Straub, 2003) and positive attitude towards the reviewer accordingly. Consistent with our hypothesis, Social presence increased the likelihood of ordering the reviewed coffee ($\beta_{Total\ Effect} = .61$; $t(154) = 2.17$; $p = .03$; 95% CI [.05, 1.17]), and this effect was fully mediated by attitudes toward the reviewer ($\beta_{Indirect\ Effect} = .42$; $SE = .17$; 95% CI [.09, .77]; $\beta_{Direct\ Effect} = .19$; $t(154) = .83$; $p = .40$; 95% CI [-.26, .65]).

Experiment-2 replicated these results in a conservative tourism context by testing the acceptance of a non-favoured travelling destination recommendation. Participants were 228 Prolific Academic users (154 women; $M_{age} = 33.5$, $SD_{age} = 12.6$), randomly assigned to either the high or the low social presence condition. Participants read three reviews of the recommended destination and indicated their willingness to take the recommendation, using a three-question seven-point Likert scale (e.g., "how likely would you choose (Tbilisi) as your travel destination?" $\alpha = .80$). Participants then completed three scales measuring social presence ($\alpha = .93$; Gefen et al., 2003; K.-M. Lee et al., 2005; Short et al., 1976); and an eight-item scale measuring attitude towards the reviewers ($\alpha = .90$). To ensure that participants received a recommendation for a non-favoured option, they first filled out a travelling preference elicitation survey where they had to rank-order four travelling styles according to their preference: "foodie," "nature," "culture," and "nightlife-seeking." The reviews featured whatever travelling style the participant had ranked in third place.

Nine participants failed to follow instructions. As before, the significant effect of social presence on willingness to travel to the recommended city ($\beta_{total\ effect}$ = .24; $t(216)$ = 1.89; p = .059; 95% CI: -.01, .49) was fully mediated by attitudes toward the reviewers ($\beta_{indirect\ effect}$ = .09; SE=.05; 95% CI [.002, .21]; $\beta_{direct\ effect}$ = .15; $t(216)$ = 1.24; p = .21; 95% CI [-.09, .38]).

Experiment-3 investigated the proposed effect when the diagnosticity of "liking" the reviewer was not relevant and, thus, non-determinant of recommendation acceptance. People seek advice when they are uncertain about the problem they are solving (Gino et al., 2012; Gino & Moore, 2007). So, in our context, attitude towards the reviewer (mediator) should matter only when the recommended item is not favored. Participants were 206 Prolific Academic workers (132 women, M_{age} = 35.7, SD_{age} = 9.9). Two factors were manipulated between-subjects: recommender type (in-group, out-group) and recommended product (most favourite, least favourite). In addition, social presence was measured and included as a (continuous) factor in the analyses. Nineteen participants did not pass the instructional manipulation check.

Willingness to accept the book recommendation was regressed on social presence, recommended product, recommender type, and all two-way and three-way interactions. As expected, receiving the recommendation from out-group vs. in-group members reduced the chance of accepting the recommendation (β = -1.81; $t(179)$ = -4.55; p = .00; 95% CI [-2.59, -1.02]). More importantly, social presence was positively associated with recommendation acceptance (β = .84; $t(179)$ = 3.72; p = .00; 95% CI [.39, 1.28]). However, as hypothesized, we identified an interaction between social presence and whether the recommended product was the most or least-favored ($\beta_{Social\ Presence\ x\ Recommended\ product}$ = -.77; $t(179)$ = -2.07; p = .039; 95% CI [-1.50, .04]). Social presence was only significant in determining recommendation acceptance when the recommended book was non-favoured: β = .50; $t(183)$ = 2.83; p = .00; 95% CI [.15, .74]).

Finally, experiment-4 tests the imagery process hypothesized to underlie the effect of social presence. Forming mental images when reading verbal information involves both visual and semantic processing (Baddeley, 1992; Jiang & Wyer Jr, 2009). If the visual or the verbal components of working memory are "busy," then the construction of vivid mental images should become impaired, reduce the effectiveness of social presence cues in recommendation acceptance. Experiment 4 was a 3 (working memory capacity: unconstrained vs. verbal-load vs. visual-load) × 2 (social presence: high vs. low) between-subjects design. The procedure was identical to experiment 2.

Participants (313 Prolific Academic workers; 176 females; M_{age} = 33.5, SD_{age} = 12.3) were randomly assigned to one of the six conditions. Participants who failed to correctly recall at least 30% of the 10-digit number (N = 12) or the positions of the "X's" on the grid (N = 7) were dropped (Gilbert & Hixon, 1991; Wentzel et al., 2010). Consistent with our hypothesis, only in the unconstrained working memory conditions did a significant difference in perceived social presence emerge (M_{low} = 4.41, SD_{low} = .13; M_{high} = 4.98, SD_{high} = .14; $t(104)$ = -3.15; p = .003); and only in the unconstrained working memory condition did high social presence reviews have a positive effect on willingness to travel to the recommended city (M_{low} = 4.62, SD_{low} = 1.42; M_{high} = 5.25, SD_{high} = 1.07; $t(104)$ = -2.61; p = .01; 95% CI [-1.11, -.15]). The result of a moderation-mediation analysis suggest that social presence and attitude toward the reviewers were positively associated (β = .43; $t(290)$ = 2.28; p = .02; 95% CI [.06, .8]), as were attitudes toward reviewers and willingness to travel to the recommended city (β = .65; $t(291)$ = 9.82; p = .00; 95% CI [.52, .78]). However, there was an interaction effect between social presence (Low/High) and working memory capacity on attitude towards the reviewers (unconstrained/constrained; β = -.46; $t(290)$ = 1.93; p = .05; 95% CI [-.92, .01]). That is, the hypothesized mediation was significant only in the unconstrained working memory condition (indirect effect = .28; SE = .12; 95% CI [.06, .52]). The moderation-mediation index was estimated by a bootstrap approach with 5000 samples (Index = -.30; SE = .16; 95% CI [-.61, -.004]). These results support that the perception of social presence in written reviews depends on being able of actually imagining interacting with the reviewer.

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Moving Away from Market Creation: Examining the Growth of Aesthetic Markets

Chair: Pierre-Yann Dolbec, Concordia University, Canada

Paper #1: The Politication of Objects: Meaning Making and Materiality in the US Cannabis Market

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Paper #2: Collaborative Market Driving: Conceptualizing Collective Action in Market Orientation Strategies

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Paper #3: Market Aestheticization: How Markets Grow Through Value Chain Complexification

Pierre-Yann Dolbec, Concordia University, Canada
Zeynep Arsel, Concordia University, Canada
Aya Aboelenien, Concordia University, Canada

Paper #4: Practice Ecosystems: From Consumer Practice Disruption to Market Reinvention

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SESSION OVERVIEW

The study of market dynamics has become an important area of inquiry in marketing (Giesler and Fischer 2017). This session is positioned within this emerging stream of literature. The four papers are tied by two threads. The first is contextual: all four papers concentrate on the analysis of an aesthetic market, defined as markets orchestrated around aesthetic and sensory products and experiences (Aspers 2001). The second is theoretical: the four papers leverage their respective contexts—the markets for beer, coffee, marijuana, and shoe repair—to extend current work that has mostly concentrated on market creation (Coskuner-Balli and Thompson 2007; Giesler 2012; Humphreys 2010; Martin and Schouten 2014). They do so by examining dynamics that contribute to market growth. By theorizing on the dynamics associated with another stage of the lifecycle of markets, the authors aim at *creating wisdom.*

The first paper, on the newly legalized marijuana market, examines how marketers can contribute to market grow by further legitimizing products. Although experiencing initial demand from some consumers, marketers faced resistance by others. The key contribution of this paper lies in its analysis of the role of materiality in stabilizing an emergent market and contributing to its growth.

The three other papers concentrate on established and mature markets. They offer three novel processes to explain market growth. The second paper examines the craft beer market, which emerged forty years ago and now accounts for 20% of the beer market. It proposes that firms can collectively shape a market in ways that improve and protect their overall competitive position. The key contribution of these papers lies in its conceptualizing of collective market-driving, which extends the previous conceptualization of market-driving centered on a single firm.

The third paper explores the development of specialty coffee, which grew from a 10% market share to more than 50% now. Its key contribution is to theorize on market aestheticization, a process through which the value chain of a market complexifies. This contributes to deepening the market's socio-material systems which accommodate and support product differentiation and leads to market expansion.

The fourth paper explains how a market responds to the disruption of a consumer practice that was previously central to the ecosystem's long-term sustainability, taking as a context the shoe repair market. It contributes to our understanding of market growth by explaining how prior destabilizing market disruptions are resolved through practice reinvention.

These four papers raise several questions, such as:
- How does market creation differ from market evolution? What unique processes explain market growth?
- How can marketers contribute to the continuous growth of their market, and in the process grab a bigger piece of the pie?

This session is envisioned as a productive inquiry of market growth that should appeal to both neophytes and experienced researchers. It will provide neophyte researchers with a broad presentation of market systems and experienced ones with insights and extensions that will add arrows to their theoretical quiver.

The Politication of Objects: Meaning Making and Materiality in the US Cannabis Market

EXTENDED ABSTRACT

Markets are political in the sense that the objects exchanged have meaning. Objects are sometimes welcomed as saviors, sometimes derided as trivial, and sometimes feared as dangerous. Previous work in consumer research has shown how media (Humphreys, 2010), consumers (Dolbec & Fischer, 2015; Scaraboto & Fischer, 2013), and companies (Giesler, 2012) play a role in legitimation of contested goods. Other work has theorized objects' roles in shaping the evolution (Martin & Schouten, 2014), relationships (Epp & Velagaleti, 2014), and practices within markets (Canniford & Shankar, 2013; Hoffman & Novak, 2017; Thomas & Epp, 2019; Thomas, Price, & Schau, 2013). Most pertinently, Martin and Schouten (2014) show how the interface between product elements and consumer uses facilitates market evolution. However, relatively little work has evaluated how object elements interface with meaning in the market and more specifically with contested or political meaning that can facilitate or impede legitimacy.

To address this gap, we examine the American recreational cannabis market, which has been legal at the state level in the states that comprise our study sample–Colorado, Washington and Oregon–for about 4 years. This market has a diverse assortment of products that expand consumption uses and meanings. From coffee pods and artisanal chocolates to lotions and smokeless vaporizing devices, the changing materiality of the tools and symbolic markers of consumption reflects active efforts on the part of producers to legitimate the category. However, full legitimacy of the market is still uncertain; recreational cannabis remains illegal at the federal level, it maintains counter-normative associations for many mainstream consumers (Robbins, 2018), and producers face strict regulations and bans on conventional advertising. It is an excellent context in which to examine the role of object elements in market legitimation.

To orient our study, we build on assemblage thinking about markets (e.g., Arsel, 2016; Weijo, Martin, & Arnould, 2018) by theorizing markets at multiple levels. We conceptualize the market as an assemblage of consumers, producers, and objects, and this assemblage is nested in a meta-market assemblage, which also includes legislation, the public, and mainstream media (Caliskan & Callon, 1986;

Müller, 2015). Through this lens, we regard the recreational cannabis market as a newly-destabilized market rather than a truly new market (see Kjellberg & Olson, 2017), thus allowing us to theorize legitimation of an existing, counter-normative market.

Our theoretical attention is on the assemblages' stability, and on their components' capacities, which are directional and specify how a component interacts with others (DeLanda, 2006; Hoffman & Novak, 2017). Prior work has shown how material capacities, which permit or impede physical interactions between components in an assemblage, are implicated in consumer adoption of new products and market emergence (Martin & Schouten, 2014). Other work has shown how expressive capacities, which enable objects to convey particular meanings, are implicated in consumer experience (Thomas & Epp, 2019). We seek to understand how objects' expressive capacities play a role in shaping cultural and social meanings of a market.

Our study used six types of data. First, to map legitimation at the meta-market level, we: (1) studied the changes in regulation and public opinion related to recreational cannabis; (2) conducted an automated text analysis of national, mainstream media coverage of recreational cannabis; and (3) conducted an opinion survey of approximately 500 undergraduate students in 2015, prior to the market opening, and in 2018, after the market had been open for two years. Then, to understand the dynamics at the market level, we (4) analyzed monthly sales data for all recreational products sold in Washington since the market opened. Analysis of this data enabled us to ascertain that the meta-market is restabilizing around legitimate meanings, and that object elements play a key role.

We then turned our attention to the market assemblage – producers, consumers, and products - to more deeply understand the mechanisms underlying the link between object elements and market legitimation. We (5) conducted 23 in-depth interviews with recreational cannabis consumers, including regular, irregular, and lapsed/non-users, and (6) analyzed producers through 9 in-depth interviews and 11 feature articles in the premier cannabis trade publication.

We find that expressive capacities of objects help legitimize the market through three interactions. First, mimesis involves the visual alignment of the new product with known, legitimate others. The meanings underlying the interactions between the product and other market actors become more legitimate when the products establish or strengthen visual relations with other legitimate products. Second, discursive alignment aligns the product with favorable discourses. Medical and therapeutic discourses are one key reservoir of legitimate political discourses from the adjacent medical market. Third, semantic distancing weakens unfavorable semantic relations. Expressive capacities of products enable products to shake unfavorable meanings by distancing relations with existing, illegitimate product markets.

In considering how the interactional level intersects with legitimacy at the market and meta-market level, differences between users—and their different capacities—comes to the fore. Objects have varying expressive capacities, but these do not uniformly fit with all consumers who themselves vary in capacities due to differences in experience, needs, and use. We find that expressive capacities of objects foster cultural-cognitive and normative legitimacy in different ways, including through heterogeneous objects and consumers.

Our findings offer two theoretical contributions. First, we explicate how object elements contribute legitimate meanings in a destabilized market. We develop the specific mechanisms that facilitate meaning transfer from legitimate categories to the newly-legal, focal market. This focus on legitimation rather consumer adoption responds to a call for a materially-oriented understanding of market evolution (Martin & Schouten, 2014). Second, we extend theorization on market legitimation by theorizing how meanings can stabilize a politically contested market (Caliskan & Callon, 1986; Roffe, 2016). In contrast to previous work that has focused on the importance of material capacities, we find that expressive capacities play a critical role, particularly in a politically contested market. Although all markets are in some ways political, understanding expressive capacities is especially important when examining contested markets, such as Amazon Echo smart speakers, Juul e-cigarettes, or recreational cannabis.

Collaborative Market Driving: Conceptualizing Collective Action in Market Orientation Strategies

EXTENDED ABSTRACT

Market orientation has become a generative concept in marketing research, with over 1,000 works dedicated to the topic (Jaworski and Kohli 2017). As this literature evolved, it has identified that firms can practice this orientation primarily in two ways: as *market driven* and *market driving* (Jaworski et al. 2000). As market-driven, firms seek to build competitive advantage by excelling in acquiring, disseminating, and responding to marketing intelligence about their target consumers (Day and Moorman 2010; Grewal and Tansuhaj 2001; Kohli and Jaworski 1990; Narver and Slater 1990). As market-driving, firms choose to be less guided by this information. Instead, they focus on leveraging their internal capabilities to shape market behaviors and structures in ways that improve their own competitiveness in the long run (Carpenter et al. 1997; Humphreys and Carpenter 2018; Jaworski et al. 2000; Kumar et al. 2000).

Despite this distinction, research on both types of market orientation has retained a steady focus on the self-interested action of single companies. In this view, each firm interacts with the marketplace while seeking the most effective routes to outperform its competitors. We suggest that this emphasis has occluded from the view of marketing theorists the relative importance of another major force in market evolution, namely collective action. As both conceptual and empirical research indicate, firms often lack sufficient means at the individual level to alter markets (Jaworski et al. 2000; Rao 2009). This situation often leads them to pool resources with other market actors, including those that are conventionally conceived of as their competitors (Belasco 2007; Esparza et al. 2014; Weber et al. 2008), and those who are avid consumers.

The present research seeks to align the emphasis of market orientation research on single firms' strategies with the sizable evidence on the impact of collective action on market evolution. It does so through an extended case study of the rise of the US craft beer market, a phenomenon that has involved cooperation among several market actors (Carroll and Swaminathan 2000). The observation window for this context goes from 1976, when new craft breweries began to open in the country, to 2016, when popular and trade press started to recognize their growth's slowdown. For about a decade, these firms had near-zero market share, struggling in an industry dominated by a few gigantic corporations and their aesthetically similar beers. Fast-forwarding to 2016, however, one finds a considerably altered scenario: the number of craft breweries has exploded to over 5,000, accounting for about 20% of the sales in the $100 billion US beer market and the multiplication of beer styles in the marketplace (Tuttle 2016). We studied this trajectory through interviews, participant-observation, and archival data.

Based on this study, we advance the concept of *collaborative market driving*, defining it as a strategy in which a set of peer firms cooperate formally and informally among themselves and with other

actors – including avid consumers – to shape markets in ways that improve and protect their overall competitive position in a given industry. Extant marketing research occasionally considers how the combined action of peer companies can drive markets, as in the study of how casinos legitimized gambling as entertainment (Humphreys 2010) and automakers normalized the minivan category (Rosa et al. 1999). These works, however, explain the effects of combined rather than coordinated action, overlooking the mechanisms that can form and sustain collaboration among firms and their allies. Therefore, we focus on two undertheorized elements at the intersection of collective action and market evolution: 1) the factors and actors that facilitate the emergence and continuation of collaborative market driving; and 2) how firms use this form of collaboration to alter entrenched market behaviors and structures.

From a theoretical standpoint, the conceptualization of this strategy contributes toward the development of a finer typology of market-driving approaches, an advancement called for by Jaworski and Kohli (2017) in order to systematize the relevant, yet understudied idea of how companies can shape and manage market evolution. Recently, Humphreys and Carpenter (2018) have contributed to this typology by adding an axis of locus of competition. They explain that, whereas marketing research has often considered how firms drive markets by focusing on technological innovation, many use status-based competition to do so. We contribute to this nascent typology an axis of form of action, theorizing how the multi-faceted collaboration of businesses can shape markets in ways that contrast to marketing orientation research's emphasis on single firms' actions.

From a practical standpoint, the conceptualization of collaborative market driving offers insights to businesses that need to pool resources in order to increase their competitiveness and ability to drive markets within established industries. This is often the case with small and medium firms, a set of market actors that mainstream marketing research has often neglected despite its significance: in the US, for example, they account for 99% of the employers, 48% of the private workforce, and nearly 66% of all new private sector jobs created in recent decades (U.S. Small Business Administration 2016). We suggest that the marketing discipline is likely to grow its impact by speaking directly to the concerns of such businesses.

Market Aestheticization: How Markets Grow through Value Chain Complexification

EXTENDED ABSTRACT

Beer, tattoo, chocolate, denim, and coffee are a few examples of products that have recently become aesthetically complex. Originally undifferentiated products, and then products solely differentiated through branding or irrelevant attributes (Carpenter, Glazer and Nakamoto 1994), these products now boast extensive differentiation based on their regional origin, manufacturing and production processes, preparation methods, skills and knowledge required to make sense of and appreciate them, and, taste. The aesthetic complexification of these products has been accompanied by intensive market transformations, where the socio-material systems which accommodate and support the aesthetic differentiation of products have also deepened. We term this process market aestheticization.

Market aestheticization is at the heart of the revival and economic expansion of several mature markets, such as the ones introduced above. Compared to work on market systems, it is a process that addresses the continuous growth of mature markets, rather than the creation of new ones or the disruption of existing ones (e.g., Dolbec and Fischer 2015; Martin and Schouten 2014). This project also complements the emergent research that has examined how the value of complex aesthetic product is discursively constructed and communicated (Fitzmaurice 2017; Ocejo 2014) by addressing the need for explaining how such products and the markets that support them aesthetically and materially evolve.

Our findings are derived from an inductive analysis of a large qualitative dataset, composed of archival data, fieldnotes, and 14 primary and 42 secondary interviews. It concentrates on three roles within the coffee market: coffee farmers, roasters, and baristas. To analyze this dataset, we draw from Schatzki's practice theory. In line with Humphreys and Carpenter's (2018) depiction of markets as systems of interdependent actors across a value chain, we conceptualize a market as a constellation of practices linked through a value chain. Our process explains how a market is complexified, how complexified practices are made manageable for everyday performance, and how market actors align their practices to deliver value to the end consumer.

Market aestheticization unfolds as follows through these three mechanisms: the first process, *complexification*, refers to the efforts of individual actors, supported by organizations and encouraged by market initiatives, to expand the practices at the core of their everyday performances, such as farming, roasting, and brewing coffee. The result of this complexification is the aesthetic differentiation of the product of these practices, such as green beans for farming, roasted beans for roasting, and brewing coffees for baristas. Second, as complexity is inherently more difficult, it demands more resources, whether it is time, effort, or material. To make complexity manageable, practices are *streamlined* by market actors. Lastly, for the value of each now-complex practices to be delivered to the end of the value chain to consumers, the added value associated with each practice (e.g., farming, roasting), need to percolate down the value chain. The last mechanism, *alignment*, synergistically brings together actors to do so.

Market aestheticization thus operates through these three mechanisms. These mechanisms are further oriented by the end goal of actors, such as farmers, roasters, and baristas. Two overarching end goals emerged from our analysis: (1) the pursuit of a 'perfect' end product, which we term "aesthetic perfection," and (2) the pursuit of profitability and mass appeal, which we term "commercial success." In contrast to existing work on creative and cultural markets (e.g., Dolbec and Fischer 2015), we show that these end goals work concomitantly, rather than through opposition, and conjointly contribute to aestheticizing a market.

We provide three sets of theoretical and managerial implications. Firstly, we contribute to the literature on market systems by emphasizing how market aestheticization supports to the evolution of mature markets through time. This process deepens a market system, leading to greater product differentiation, and the development of skills and knowledge around market practices and products. Furthermore, it leads to the expansion of the market, or economic growth.

Secondly, we contribute to the literature on market system dynamics by showing how actors across the value chain can collectively propel a market through their individual pursuits, even when they have different roles, resources, understandings, ends, or goals. Our process theorization informs how markets—as diverse as those for craft beer, tattoos, or denim—have aestheticized. We show how practices complexify and deepen, and how they are streamlined to be manageable for everyday performance. These two concomitant mechanisms unfold guided by two dialectical teleologies. We thus extend existing work on the replication and adaptation of practices (Ansari, Fiss and Zajac 2010) to highlight practice evolution.

Lastly, we propose three sets of strategic implications for organizational actors in an aestheticizing market. We first offer guidelines for firms to master the complexity required to be competitive in a mature market. We second introduce a practice-based innovation approach, bringing the attention to the need for innovating on practices, rather than products, and how this can convey meaning and create value for consumers. Third, we argue that, at the market-level, organizations should collectively strive to cultivate teleologies in order to align other actors (including consumers) in a complexified market.

Practice Ecosystems: From Consumer Practice Disruption to Market Reinvention

EXTENDED ABSTRACT

Market systems shape the behavior of the consumers who live and act within them (Giesler and Fischer 2017). Consumption practices, rather than being merely individual enactments or performances, are a complex integration of "forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz 2002, 249). Practice theories provide a useful conceptual lens for viewing and analyzing the ways in which micro-level phenomena, such as consumers enacting practices like paintball (Woermann and Rokka 2015) or cosplay (Seregina and Weijo 2017), shape and are shaped by macro-level structures, such as taste regimes promoted by powerful marketplace institutions (Arsel and Bean 2013).

However, by focusing analytical attention primarily on practices as they are enacted by consumers, research has not fully conceptualized the ways in which consumption practices integrate within broader market ecosystems. Such a holistic understanding is particularly important for the study of disruption in both market ecosystems and consumption practices. Consumer research has studied how new consumption practices can instigate market disruptions (Giesler 2008) and how consumers can respond to disruptions of their own practices (Phipps and Ozanne 2017). However, prior research has not examined how market ecosystems respond following the disruption of a consumer practice that was previously central to the ecosystem's long-term sustainability.

Recent conceptual developments in practice theory have drawn attention to the material dimensions of consumption practices. Drawing on these materialist theories of practice (Schatzki 2001; Shove, Pantzar, and Watson 2012), we analyze markets as practice ecosystems consisting of human, material, and cultural resources. Studying consumption practices from an ecosystem perspective enables a clearer conceptualization of the interdependencies between multiple resources and actors integrated by a market (Storbacka and Nenonen 2011; Vargo and Lusch 2016). A practice ecosystem includes systems of consumption, as well as the systems of production, distribution, and disposal that are sometimes overlooked in consumer research.

Specifically, we examine at the ways that practice elements, including meanings, materials, and competences (Shove et al. 2012), are distributed and integrated across a practice ecosystem. This allows us to analyze and reconceptualize market disruption as a phenomenon occurring at multiple interdependent levels within a practice ecosystem, rather than as the effect of an innovative product or charismatic entrepreneur. We study practice disruption through an ethnographic and historical analysis of the U.S. footwear production, consumption, and repair ecosystem. We focus on the practice of shoe repair and its integration with the wider footwear ecosystem through interdependent meanings, materials, and competences. Our data include (1) participant observation in shoe repair shops and industry trade shows, (2) in-depth interviews with producers, retailers, distributors, repair professionals, and consumers, and (3) online and archival data mapping out past and present networks of meanings, materials, and competences shared between the shoe repair practice and the broader footwear industry.

We find that the disruption of a consumer practice can be traced to vulnerabilities across an ecosystem of production, distribution, consumption, and repair. The practice of shoe repair involves specific integrations of interdependent competences and materials. Modern industrial shoe production and distribution systems, however, decouple human competences from processes that integrate materials into meaningful, consumable forms. In this decoupled practice ecosystem, the meanings created through consumer practices of shoe wearing are relatively independent of the materials and competences integrated through shoe production, repair, and maintenance. Decoupling meanings, materials, and competences in the broader market ecosystem weakens the links these elements form between practices of shoe production, repair, and consumption—leaving the practice of shoe repair vulnerable to disruption. With few interdependencies between the practice elements involved in shoe wearing and repairing, the consumer practice of shoe repair faded from the mainstream U.S. market. This conceptualization adds cultural depth to conventional notions of disruption as a displacement of people and resources induced by the release of an innovative product or service into a market (Christensen 1997).

We also find that, following disruption, residual competences remain can active within a practice ecosystem. As these competences continue to integrate both old and new materials, a disrupted practice can persist even following its mainstream market disruption. Many consumers and shoe repair professionals, for example, find ways to creatively repair shoes produced with materials and processes that appear completely divorced from those conventionally required by the practice of shoe repair.

The persistence of a disrupted practice in the market also draws attention to vulnerabilities in the new, dominant practice ecosystem. As the industrial shoe production system decoupled competences from materials, it also weakened the material links between its practices and the meaning and value experienced by consumers. We find that shoe repair practitioners exploit these weak links by creating new and revived meanings within their practice. These meanings are based on and interdependent with specific competences and materials that practitioners must integrate as they repair shoes. We find these reinvention processes occurring across a wide range of contexts—from rock climbers repurposing tools and equipment to repair their own and others' climbing shoes, to novice cobblers bypassing traditional networks of trade-specific knowledge in order to forge meaningful ties with consumers who wear luxury dress shoes, Birkenstock sandals, or other niche market objects. Thus, by foregrounding the symbolic value of their material labor, shoe repair professionals and consumers build new identities and new markets around meanings created by the re-forging of interdependencies between the competences and materials integrated through their practices.

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Understanding the Mechanisms and Outcomes of Intensive Marketization

Chairs: Anil Isisag, University of Wisconsin - Madison, USA
Ankita Kumar, Bucknell University, USA

Paper #1: Mobile Dating Apps and the Intensive Marketization of Dating: Gamification as a Marketizing Apparatus

    Anil Isisag, University of Wisconsin - Madison, USA

Paper #2: Marketization of Care: How Consumers Navigate the Commoditized Eldercare Services Market

    Ankita Kumar, Bucknell University, USA

Paper #3: Digital Platforms and the Intensive Marketization of the Second-Hand Clothing Market

    Elodie Juge, University of Lille, France
    Isabelle Collin-Lachaud, University of Lille, France
    Anissa Pomies, Emlyon Business School, France

Paper #4: Relating Americans' Responses to the Marketization of Armed Self-Defense to Their Understandings of the Second Amendment

    Michelle Barnhart, Oregon State University, USA
    Aimee Huff, Oregon State University, USA
    Inara Scott, Oregon State University, USA

SESSION OVERVIEW

By virtue of the propagation of neoliberal ideology and adoption of neoliberal socio-economic policies across the globe (Foucault 2008; Harvey 2005), there has been renewed academic interest in marketization of social life—commonly understood as the infiltration of market logics into quarters of human life, such as religion, family relations, and intimacy (e.g., Hochschild 2005, 2012; Zelizer 2005). In marketing literature, consumer culture theory (CCT) scholars have yielded important insights into the marketization debate, by illuminating ways in which market logics permeate into different domains of social life and how consumers navigate these marketized domains (e.g., Epp and Velagaleti 2014; McAlexander et al. 2014; Varman, Saha and Skalen 2011; Vikas, Varman and Belk 2015; Zwick and Cayla 2011).

Sociologist Michel Callon suggests that marketization entails not only establishment of new markets in new domains i.e., extensive marketization, but also transfiguration(s) of market structures and concomitant amplification of market pressures where markets already exist i.e., intensive marketization (Callon 2016; Caliskan and Callon 2010). Borrowing this broad conceptualization, we examine some distinctive characteristics of contemporary intensive marketization(s) via empirical studies of four different cases of marketization. These studies collectively address the following questions: Through what different mechanisms does intensive marketization transpire? How does the intensification of market logics reconfigure relationships between human (and non-human) actors? What repercussions do such transformations have on consumers' lives and how do they shape consumer subjectivities? How do consumers cope with these repercussions?

The first paper investigates the intensive marketization of dating via mobile dating apps and their gamified interfaces. Focusing on consumers' experiences within and beyond these platforms, it characterizes the ways in which gamification as a marketizing apparatus reconfigures dating.

The second paper examines intensive marketization in the context of the American eldercare industry. It traces the emergence of this commercialized market with its attendant issues of heightened risk and greater individual/familial responsibility and demonstrates

how consumers leverage resources to postpone reliance on more problematic, heavily commoditized forms of service.

The third paper examines how the emergence of digital platforms has transformed existing amateur-to-amateur markets through an amplified competition. It demonstrates that such intensive marketization is visible through easier comparisons between commodities, a transformation of users' skills, and a modification of professional actors' activities supporting competition between users.

The fourth paper focuses on the American firearms market, linking intensive marketization to consumer responsibilization. Motivated by dramatic shifts in the market's socio-material elements that support the marketization of armed self-defense, it examines linkages between consumers' response to marketization and their understandings of their constitutional right to bear firearms.

In the spirit of this year's ACR theme of "Becoming Wise," this session seeks to cross-fertilize established conceptualizations of marketization with novel learnings about the impact of contemporary entanglements between conflicting logics. It informs and invites discussion about theoretical debates on the intertwinement of and tensions between multiple logics, formation and reconfiguration of market structures, and the concomitant restructuring of consumer subjectivities within marketized domains.

Mobile Dating Apps and the Intensive Marketization of Dating: Gamification as a Marketizing Apparatus

EXTENDED ABSTRACT

Introduction and Theoretical Background

"Dating apps are the free-market economy come to sex. The innovation of Tinder was the swipe—the flick of a finger on a picture, no more elaborate profiles necessary and no more fear of rejection; users only know whether they've been approved, never when they've been discarded... It's telling that swiping has been jocularly incorporated into advertisements for various products, a nod to the notion that, online, the act of choosing consumer brands and sex partners has become interchangeable." –Nancy Jo Sales, *"Tinder and the Dawn of the Dating Apocalypse, Vanity Fair, August 6, 2015.*

Ever since its origination amidst the boom in leisure industries at the turn of the twentieth century, the social practice of dating has been intertwined with market offerings and market-mediated meanings (Illouz 1997). From the very beginning, commercial products and services such as automobiles, movie theaters, and dance halls have been the primary settings to initiate romantic relationships. Nevertheless, due to the emergence of market-mediated matchmaking services such as computer dating, video dating, online dating websites, speed dating, and recently mobile dating apps, dating has been under the scrutiny of scholars and journalists that take an interest in the marketization of social life (e.g. Ahuvia and Adelman 1993; Heino, Ellison, and Gibbs 2010; Hirschman 1987; Illouz 1997, 2007, 2012; Weigel 2017).

As the opening quote illustrates, mobile dating apps—the latest generation of commercial introductory services that initially emerged in 2012— present a unique case of marketization. While

these platforms can be considered as successors of online dating websites, they offer a comparatively effortless, casual and fun experience. This sort of user experience is created by way of the affordances of gamification—most commonly defined as "the use of game design elements in non-game contexts" (Deterding et al. 2011: 9). Harnessing the location-based GPS capabilities of smartphones, the apps enable users to find and interact with potential dating partners within close geographical proximity (David and Cambre 2016; Lefebvre 2018). Additionally, they opt for simplified, visualized user interfaces with little information, integrating swiping, pop-up notifications and other game-like elements. Thereby, they differentiate themselves from online dating sites, the operating logic of which is based on hyper-cognized compatibility questionnaires and matching algorithms.

Focusing on consumers' experiences within and beyond these new generation matchmaking platforms, this study examines the contemporary marketization of dating. In doing so, I draw on Callon's comprehensive definition of marketization (Callon 2016; Caliskan and Callon 2010). According to this definition, marketization encompasses instances of extensive marketization where market logics penetrate into domains of social life which were thought to be outside the reach of these logics as well as instances of intensive marketization in which the existing market logics are reconfigured and the market's hegemony is intensified within said domains. While the few existing consumer research studies on the marketization of dating and romance illuminate the salience of market logics within early analog introductory services and consumers' tactics of navigating their marketized romantic lives (Ahuvia and Adelman 1993; Hirschman 1987), this study rather focuses on the reconfiguration of existing dating market logics by virtue of mobile dating apps and their gamified interfaces. I postulate that, within the context of dating, gamification operates as an apparatus of intensive marketization.

Findings

Drawing on an extensive qualitative dataset consisting of interviews with app users, branded content of major mobile dating apps, app interface walkthroughs, and archival data from traditional and digital news media, I investigate the ways in which, as an apparatus of intensive marketization, gamification reconfigures the social practice of dating.

My analysis demonstrates that by drawing the interest of an ever-growing group of emerging adults—a demographic group that has been distant to online dating websites—, the gamified app interfaces facilitate the transition from a hypercognized dating market logic— as epitomized by online dating websites— to a ludic dating market logic. The latter differs from the former as per its heuristical (versus rationalistic) choice framework, its "playing the field" (versus finding the perfect product) mode of market engagement, and its masking the romance-market entanglement under the game frame (versus an overt economistic approach). As gamification paves the way for the ascendancy of the ludic dating market logic, it reconfigures dating by trivializing romantic-sexual initiation and dissolution rituals, accentuating app users' self-centered romantic-sexual identity projects, and permeating real life instances beyond the usage of the apps. In accordance with Callon's definition of intensive marketization, on top of reconfiguring existing market logics, it intensifies the market's hegemony within the domain of dating.

Contribution

In light of these findings, I strive to contribute to theoretical discussions on marketization, gamification, and romance. Firstly, while extant CCT research on marketization examined the infiltration of market logics into social domains such as religion, family relations, social hierarchies, and education and other public services (e.g. Epp and Velagaleti 2014, McAlexander et al. 2014, Varman, Saha and Skalen 2011; Patsiaouras, Saren and Fitchett 2015; Varman, Saha and Skalen 2011; Vikas, Varman, and Belk 2015), scant attention has been paid to the domain of dating and romance (c.f., Ahuvia and Adelman 1993; Hirschman 1987). I intend to extend this line of work by illuminating a case of contemporary, intensive marketization. Second, I intend to contribute to game studies literature by demonstrating that besides enhancing employee motivation, encouraging consumer engagement, and collecting consumer data (Robson et al. 2015; Seaborn and Fels 2015), gamification can also operate as an apparatus of marketization. Finally, I aim to advance the extant literature on dating and romance (e.g. Bailey 1988; Illouz 2007, 2012; Weigel 2017) by elucidating the ways in which gamification refashions dating and providing a detailed account of the emergent ludic market logic.

Marketization of Care: How Consumers Navigate the Commoditized Eldercare Services Market

EXTENDED ABSTRACT

Introduction

As Americans spend longer hours working in often precarious jobs, there has been a necessary rise in dependence on market resources for fulfillment of personal and familial needs (Hochschild 2003). This has resulted in the infiltration of market logics into intimate spheres of life which were once presumed to be outside the realm of the market. There are two prominent perspectives regarding this commercialization of intimate life: the 'hostile worlds' notion, which suggests that markets are spheres of utilitarianism and selfishness that promote profit-seeking, undermine collective moral values, and cause social disintegration (e.g., Polanyi 1944; Sandel 2012); a second 'connected lives' view emphasizes the commingling of economic activities and intimate relations (e.g., Zelizer 2005, 2011) (Epp and Velagaleti 2014; Livne 2014). Some CCT research has taken the latter approach and sought to understand how consumers manage the entwining of commercial services in family and religious life (e.g., Epp and Velagaleti 2014; McAlexander et al. 2014; Thompson 1996).

The ascendancy of market logics and concomitant waning of the welfare logic in the eldercare industry represents intensive marketization, which signifies the escalation of market pressures and a pervasive discourse of familialism, producing additional complexity for families using marketplace services (Callon 2016; Caliskan and Callon 2010; Hooyman and Gonyea 1995). Taking cues from Callon and Zelizer, this study seeks to understand the relational work of caring in the context of dementia related eldercare. It explores how consumers negotiate this mingling of economic transactions in the domain of care, by leveraging differential resources to resolve tensions in a commoditized market that places greater onus for personal caregiving with its innate need for physical and emotional labor on families (Hochschild 1983).

Methods

This research uses Elias's figurational sociology (Elias 1978) and Bourdieu's theory of capital (Bourdieu 1986) to examine the relational networks, care policies and role of capital in the eldercare market. For a sociohistorical understanding of the eldercare industry, secondary and archival resources on senior care, facility news, health policy and public health debates in print and social media

were analyzed. Subsequently, in-depth interviews were conducted with 20 primary family caregivers to understand their subjective experiences, management of available resources and tensions related to using a continuum of services (Thompson, Locander and Pollio 1989). Additionally, participant observation was conducted at caregiver support-group meetings for 12 months. Data analysis followed a hermeneutic approach (Thompson 1997).

Findings

A review of archival data and secondary literature helps trace the sociohistorical reconfiguration of the American eldercare market. Traditionally care for the elderly was performed by families. The elderly who did not possess familial or financial resources sought care in almshouses. The Social Security Act of 1935 expressing a general disapproval of these institutions that mingled the 'worthy' and 'unworthy/undesirable' needy, barred pensions for their residents. This produced the unintended consequence of founding a private nursing home industry. The passage of Medicare and Medicaid in 1965 provided additional impetus to the growth of a commercially driven and largely unregulated nursing home industry. Various subsequent acts served to regulate—and to an extent—improve the conditions in nursing homes. Since the 1980s, there has been increased emphasis on home and community-based care (Haber 2016; Haber and Gratton 1994). With the rise of neoliberalism in the 1990s, intensive marketization has further transformed the eldercare industry. Large, diversified, for-profit nursing home chains owned by private equity investors, with changing ownership and complex organizational structures have come to dominate the market, making it increasingly difficult for consumers to have clarity about ownership, costs, quality of care and redress (Harrington et al. 2017; Wilson 2007). This has contributed industry-wide to high turnover and low motivation among care workers, poor staffing ratios and care shortfalls; rather than being patient-centered, care is often routinized and commoditized (Duhigg 2007; Rau 2018). Families using residential facilities pay exorbitant prices owing to greater stringency of welfare eligibility and insurance coverage (Scism 2016). Historically eldercare has been reconfigured from a 'rugged individualist' to a social welfare to a more individual (or family) responsibilization model today (Haber 2016).

Institutionalization has always been associated with the stigma of dependency, abandonment, loneliness and heightened sense of impending mortality (Haber 2016; Nursing homes). Influenced by cultural discourses of familialism (Hooyman and Gonyea 1995) and awareness of the deficient care in heavily commoditized residential facilities, families based on their financial capability use a variety of personal and institutional resources such as social networks, adult daycare, at-home care, volunteers and accumulate expertise as caregivers to maintain the patient as long as possible in their own home. Given the evolving course of dementia, shifting patient needs, families constantly adapt resources and care practices to minimize emergent tensions. Caregivers must manage tensions produced by shortfalls in quality of care and quality of life (especially after facility admission), negotiate decisions with other family members and service providers, cope with guilt, manage conjugal family and work responsibilities and navigate various dichotomies such as acknowledging patient personhood while being their decision maker. This combination of caring and economic activity by families managing care of elderly dementia patients takes place in a context of incessant negotiation, sometimes cooperative, other times full of conflict with service providers (Zelizer 2005, 165). In order to minimize these tensions, caregivers employ a variety of strategies such as monitor-

ing, advocacy, supplementation and substitution. However, these tensions are never completely eased.

Contribution

This research contributes to work on the detrimental effects of marketization and highlights challenges such as heightened risk, vulnerability and responsibilization consumers experience (e.g., Varman and Vikas 2007; Voice Group 2010) and thus offers insights for the conference theme of 'becoming wise'. Additionally, through the context of eldercare, it demonstrates how market reconfiguration via intensive marketization occurs and shapes consumer subjectivities. Finally, this study draws attention to the role of resources in outsourcing of care and explicates how inspired by cultural discourses, consumers employ combinations of resources and services to postpone or avoid reliance on more heavily commoditized forms of service.

Digital Platforms and the Intensive Marketization of the Second-Hand Clothing Market

EXTENDED ABSTRACT

Introduction

Since Peñaloza and Venkatesh (2006)'s call for analyzing the functioning of markets, marketing and consumer scholars have been exploring cases of new market creation (e.g., Humphreys 2010; Martin and Schouten 2014) and established market transformation (e.g., Dolbec and Fischer 2015; Ertimur and Coskuner-Balli 2015; Scaraboto and Fischer 2013). This body of literature has highlighted the active role played by a wide range of human actors in market dynamics (Giesler and Fischer 2017). Existing work has also emphasized the role played by non-humans in market (de)formation, including magazines (Martin and Schouten 2014), metrological tools (Muniesa, Millo and Callon 2007), and carts (Cochoy 2010). Recently, Perren and Kozinets (2018) shed light on an omnipresent yet overlooked non-human, digital platforms. The authors show that digital platforms shape market exchanges through their extent of consociality and intermediation. Although they bring useful insights on the functioning of peer-to-peer markets, they focus on markets that are *already* mediated by digital platforms. Existing amateur-to-amateur markets that have been disrupted by the emergence of digital platforms at some point in their history are out of the authors' scope. Therefore, we aim at offering a dynamic analysis documenting how the emergence of digital platforms has transformed markets involving equivalently positioned economic actors.

To do so, we draw on the Actor-Network Theory, a framework assuming that markets are plastic entities always in the making (Callon 2010, 2017). In this perspective, the marketization process is central to the functioning of markets (Callon 2016). More precisely, intensive marketization refers to an increased and amplified competition within existing markets (Callon 2016). Armed with this conceptual apparatus, we ask the following research question: how do digital platforms contribute to the intensive marketization of amateur-to-amateur markets?

Empirical Context and Methods

To answer this question, we investigate the second-hand clothing market while focusing on the French context. French consumers have been selling and buying second-hand clothes at tag sales ("*Braderie*") since the 18th century. Yet, digital platforms emerged in 2008, thus disrupting the second-hand clothing market. Instead of face-to-face interactions, buyers and sellers meet online through

digital platforms. From May 2013 to February 2019, the first author carried out a multi-method ethnography of the second-hand clothing market. She conducted 17 in-depth interviews with consumers who buy and sell second-hand clothes. She also carried out online observations of 4 digital platforms (Facebook, vestiairecollective, videdressing, and vinted), and *in situ* observations at offline events where amateurs meet to buy and sell second-hand clothing. The dataset includes more than 20 hours of audio recording, 120 pages of transcription, more than 200 posts from these platforms, and 35 pages of fieldnotes.

Findings

Our data shows that digital platforms have contributed to the intensive marketization of the second-hand clothing market in three ways. First, digital platforms normalize exchanged commodities. Indeed, digital platforms provide normalizing templates that users must adopt to sell their clothes: users must mention a precise set of elements (size, brand, fabric, manufacturing location), and upload three high-quality pictures (different zooms). Normalizing templates set commodities in a common calculative space, and increase competition by enhancing their visibility and facilitating comparisons. Second, digital platforms have transformed amateurs themselves by reshaping their skills. Users surpass themselves to sell and to buy efficiently. To do so, they mimic marketers' practices (e.g., pricing strategy, relationship marketing, merchandising) while developing new, specific practices (e.g., buying a commodity to sell it right after at a higher price; selling as many commodities as possible to buy new clothes afterwards). Digital platforms force users to be faster, which means being the first seller to answer a potential buyer's request, and being the first buyer to find a bargain. Digital platforms therefore create a competition on pace between users. Third, digital platforms have transformed the ecosystem of professional actors enabling lateral market exchanges. These professional actors have adapted their offer to support the increased competition on pace within the market. For example, virtual wallets were created to reduce payment time, and delivery services have reduced delivery lag time while increasing the number of pickup points. Those services facilitate, increase, and speed up transactions between users.

Contribution

We contribute to the literature on market dynamics by showing that the emergence of digital platforms has transformed lateral exchange markets through an increased and amplified competition between amateurs. Such intensive marketization is visible through easier comparisons between commodities, a transformation of users' skills, and a modification of professional actors' activities to support competition between users. Because the topic of the 2019 ACR conference is "becoming wise", we also highlight the dark side of intensive marketization. To do so, we build on Rosa (2010) to show that intensive marketization might lead to hyperconsumption, and to the exclusion of slow users who cannot or do not want to keep the pace.

Relating Americans' Responses to the Marketization of Armed Self-Defense to their Understandings of the Second Amendment

EXTENDED ABSTRACT

Introduction

Over the last 30 years, industry lobbying groups, conservative politicians, and American courts have expanded individual gun rights afforded by the Constitution's Second Amendment (see District of Columbia v. Heller 2008; Melzer 2019; Waldman 2014). These expansions have shifted the responsibility of thwarting criminal activity through use of armed force from the state to individual consumers (Lott 2016; Winkler 2011), resulting in a dramatic reconfiguration of the American firearms market. The market has reoriented around different materiality; focal market offerings have shifted from long arms (i.e., rifles) to handguns (Carlson, Goss and Shapira 2019). Consumer practices, norms, and identity construction related to firearms have also shifted: fewer citizens own guns; the average number of guns per owner has increased; self-defense, rather than hunting, has become the most common reason for purchase; lawful carry of concealed handguns in public is more common (Lott 2016); and firearms are increasingly implicated in conservative identity politics (Gramlich 2018; Melzer 2019).

We conceptualize this reconfiguration as a form of intensive marketization (Caliskan and Callon 2010; Callon 2016). The firearms market has been transfigured; it has internalized socio-material elements—including court rulings, materiality, and political rhetoric—that were not previously considered part of the market (Caliskan and Callon 2010). This marketization is consistent with the *capabilization* step of the P-A-C-T process explicated by Giesler and Veresiu (2014), as market and political agents have responsibilized consumers to defend themselves from criminals. In our research, we ask, what are consumers' responses to this marketization? And, how do their responses relate to their understanding of the right to bear arms granted by the U.S. Constitution?

Literature

CCT research on marketization (e.g., Giesler 2012; Luedicke, Thompson and Giesler, 2010; Martin and Schouten 2014), the responsibilization of the consumer subject (Giesler and Veresiu 2014), and consumers' rights and responsibilities (Henry 2010) has identified the complex and dynamic relations between consumers, producers, institutions, policies, and materiality in contexts characterized by competing, contested, or emerging market logics (Callon 1986, 2016; Martin and Schouten 2014).

Giesler and Veresiu's (2014) seminal work on responsibilization illuminated market agents' and institutions' efforts to construct responsible consumer subject positions but did not adequately theorize consumers' roles in the final step, *transformation*, which requires consumers to accept, if not embrace, the position created. We address this gap by examining consumer responses to marketization that capabilizes them to assume the responsibility of using lethal force to stop criminal activity. Second, CCT scholarship investigating consumer rights and responsibilities has often focused on responsibilities to firms, and less directly, to family members and oneself (Henry 2010). Scholars have called for more research on consumers' responsibilities to society (Prothero et al. 2011). We answer this call in investigating American consumers' right to possess and use firearms.

Methods

This study is part of a multi-year, multi-sited ethnography on American gun culture. We employed social media and interview data in this study. We obtained data from a closed, moderated, five-week, Facebook group discussion focused on guns in America. The discussion occurred shortly after the highly publicized massacre at a high school in Parkland, Florida, in 2018. The Facebook data included 11,830 posts and comments from a diverse group of 150 Americans. Additionally, we conducted in-depth interviews with 15 gun-owners and non-gun-owners in Texas, a state in which handguns are common. Data were coded manually, and analyzed in iterative phases

to eventually delimit theory pertaining to our research questions (Charmaz 2006; Corbin and Strauss 1990).

Findings

We find that differences in responses to this marketization relate to consumers' understanding of (1) the nature of the Second Amendment, across four dimensions, (2) the relationship between negative and positive freedoms implicit in the right, and (3) the roles of morality and regulation in ensuring negative freedoms.

Each dimension of understanding of the Second Amendment is a continuum, with an individual's understanding situated somewhere between two extremes. Dimensions are: *absolute—conditional*, *sacred—secular*, *necessary—extraneous*, and c*ontemporary—antiquated*. Individuals whose overall understanding leans more towards absolute, sacred, necessary, and contemporary tend toward embracing consumers' responsibility for protecting oneself with firearms and the marketization that capabilizes them to do so. Those whose understandings lean more towards conditional, secular, extraneous, and antiquated tend toward rejecting assigning this responsibility to consumers and such marketization.

Further, we find that consumers understand the Second Amendment as a bundle of positive freedoms (Berlin 2002), including the freedoms to: defend oneself and one's family with lethal means; be self-reliant; live a chosen lifestyle; choose from an array of firearms available in the marketplace; engage in leisure activities with firearms; and raise a militia. Consumers relate these positive freedoms to a corresponding set of negative freedoms (Berlin 2002), including, freedom from: physical harm; aggression; intimidation; and fear. Individuals who embrace responsibilization describe these positive freedoms as ensuring negative freedoms, while those who reject is describe the former as a threat to the latter.

Finally, we find that consumers who embrace the marketization deem morality and personal responsibility taught in the home as the primary means of persuading citizens to use their positive freedoms to protect one another's negative freedoms. However, those who reject such marketization deem these means inadequate, and describe regulation as necessary to protecting negative freedoms.

Contributions

We contribute to work on marketization (Martin and Schouten 2014; Luedicke et al. 2010) by relating consumers' understandings of their right to consume a product to their responses to intensive marketization (Callon 2016) of an activity once assigned to the state. We also contribute to work on responsibilization (Giesler and Veresiu 2014) by providing insight into the final step, *transformation*. Specifically, we demonstrate how consumers' understandings of a right that is sutured to a responsible consumer subject position by institutions and agents in the first steps of the process, impacts consumers' acceptance of the position.

Additionally, we extend work on consumer rights and responsibilities (Henry 2010) by introducing new concepts, negative and positive freedoms, to consumer research, and we extend scholarship on firearms (Carlson et al. 2019) by providing nuance into Americans' understandings of the Second Amendment.

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Mental Health and Consumer Behavior

Chairs: Cristel Russell, Pepperdine University, USA
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Paper #1: Post-Traumatic Stress and Consumption Behaviors

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Dale W. Russell, Uniformed Services University, USA
Ronald Paul Hill, American University, USA

Paper #2: Discourses of Disability: Building Physical and Mental Marketplace Resilience

Samantha Cross, Iowa State University, USA
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Paper #3: Promoting Consumer Mental Wellness Through Emotion Regulation Strategies

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SESSION OVERVIEW

The experience of stress and traumatic events has long been linked to negative mental, behavioral, and physical health outcomes including maladaptive consumption such as addictive (e.g., Hirschman 1992) and compulsive (e.g., Faber et al. 1995) behaviors. Mental health issues are on the rise: According to statistics from the U.S. National Institute of Mental Health (NIMH 2016), approximately 45 million Americans struggle with one or more mental health issue, with females, older teenagers, and multi-race persons being more at-risk. Given the growing number of people worldwide who suffer from depression, anxiety, post-traumatic stress disorder, and other emotional maladies, consumer researchers should strive to better understand the relationship between mental health and consumer behavior.

On the health side, behavioral health researchers are integrating consumer behavior theories to develop campaigns to help consumers navigate the mental healthcare system (e.g. Bielavitz, Wisdom, and Pollack 2011) or to communicate information about mental health (e.g. Chang 2008). The large body of research documenting relationships between mental health and substance use/abuse has guided the development of interventions such as those funded by the Substance Abuse and Mental Health Administration (SAMHSA 2019).

Within consumer research, however, few studies have tied mental health and consumption behaviors; for example, Hill (1991) and his colleagues (Stamey 1990) examined homeless persons who suffered from a variety of stressors and physical and mental challenges, as well as substance abuse, but did not find direct linkage between particular mental health issues, stressors or forms of consumption in terms of coping mechanisms. Other research focused explicitly or tangentially at addiction as a driver of behavior rather than driven by mental health concerns (see Lowenstein 2001 for an interesting critique that makes this point salient).

On the whole, and despite many calls for more health-focused research (Moorman 2002; Mick et al. 2012), the consumer behavior field lacks a comprehensive understanding of why and how the mental health construct, broadly construed, impacts consumption processes, ranging from felt need to dispossession. Therefore, this special session addresses the following questions:

How do mental health issues arise in particular circumstances and how can they be categorized and measured for use by consumer researchers?

How do specific manifestations of mental health issues impact consumer behavior in ways that are often considered outside of mainstream consumer research?

Can a more comprehensive way of studying the impact of mental health issues on consumer behavior be developed?

The first presentation illustrates the relationships between stressors, mental health, and maladaptive consumption behaviors with data from a longitudinal study of servicemembers deployed to a combat zone. The second presentation shows how mental resilience is constituted by how persons experiencing and living with disabilities attempt to overcome barriers in the marketplace. The third presentation brings out hopeful strategies for consumers to improve their 'mental wellness.' The concluding discussion, led by an academic researcher with professional mental health experience, will weave the three projects together and address the importance of multi-method approaches to our understanding of mental health and consumption.

Post-Traumatic Stress and Consumption Behavior

EXTENDED ABSTRACT

The experience of stress and traumatic events has long been linked to negative mental and physical health outcomes. In the U.S., a large number of servicemembers and veterans continue to suffer mental health and maladaptive behavioral issues despite numerous programs that strive to mitigate negative outcomes associated with military service (Defense Health Agency 2017). The prevalence rate of mental health disorders is especially high in military populations due to key environmental exposures; for instance, direct exposure to combat has been widely associated with Post-traumatic Stress Disorder (PTSD), depression, and aggressive behaviors (Hoge et al., 2004; Hoge et al., 2007; Russell et al., 2014; 2015; Castro and McGurk, 2007).

Within the realm of consumption, adverse outcomes can involve addictive and compulsive behaviors, such as substance abuse and compulsive buying. Despite growing interest among consumer researchers on drivers of these negative behaviors, empirical evidence regarding the impact of extreme levels of stress on such outcomes is limited. It is also important to distinguish between types of stressors experienced: those related to being in a dangerous situation (e.g., a combat zone for soldiers) versus those related to being away from home.

This study investigates relationships between military deployment-related stressors and maladaptive consumer behavior outcomes. Our research draws on longitudinal survey data collected from a Guam-based National Guard unit deployed in combat to Afghanistan. Measures of exposure to combat- and deployment-related stressors were collected on location during the soldiers' deployment. Post-deployment survey data were collected approximately 6 months after the soldiers returned to their homes, when mental and behavioral health issues often develop (Bliese et al. 2007). In addition to completing a series of clinical and mental health screening assessments such as PTSD, depression, and anxiety, respondents reported negative consumption behaviors such as alcohol (ab)use, compulsive buying, and materialism.

The sample consists of 261 soldiers with matched responses across time points (81.4% males, average age 30 years old, 78.4% native Chamorro). Initial results reveal a complex pattern for how

experiences of combat- and deployment-related stressors relate to maladaptive consumption outcomes upon returning to Guam: deployment stressors (being away from family, not having access to the usual commodities) are related to greater levels of materialism and compulsive buying; but combat stressors (being shot at, seeing dead bodies, etc.) are related to lesser levels of compulsive buying or materialism. We also find that maladaptive substance use is indirectly related to stressors through mental health outcomes: the more PTSD, depression, or anxiety one experiences upon returning from deployment, the more likely they are to engage in risky behaviors, such using and misusing substances (alcohol, nicotine, or other stimulants).

We discuss the role of consumption both as a direct outcome of stressful experiences and as a coping mechanism for mental health issues that emerge from these stressful experiences (Pavia and Mason 2004). We also point out the importance of distinguishing between types of stress and whether they lead to more or less maladaptive consumption outcomes and ultimately lower well-being (Burroughs and Rindfleisch 2002). This first presentation linking stressors, mental health diagnoses, and maladaptive behaviors in the marketplace, sets the stage for the next two presentations and their focus on ways to increase consumer resiliency and improve mental wellness.

Discourses of Disability: Building Physical and Mental Marketplace Resilience

EXTENDED ABSTRACT

Diversity in the marketplace and the wider society is often heralded as a positive as researchers have increasingly explored the impact, consequences, and challenges of consumption for diverse populations related to race, gender, ethnicity and nationality. Yet the challenges of consumers with disabilities are often taken for granted, under-appreciated or under-studied. Imagine a situation where you and your young son are asked by the flight attendants to disembark from a plane because of a shared genetic skin condition that, while disfiguring, poses zero risk to anyone else. Or questions from retailers and other consumers whether you and your guide dog are fakes because neither of you fit the assumptions others have of those with disabilities and their guides. For many consumers with disabilities, whether visible and immediately apparent, or less visible and more difficult to discern, dealing with physical and cognitive disabilities is challenging and exhausting. Yet, dealing with the misconceptions, insensitivities and prejudices of others in the marketplace also exacts a mental toll that often leads, not just to mental stress, but to additional mental illnesses or conditions, such as depression and social anxiety.

The relevance of their possible resilience is underscored in studies on disaster planning and public health protection (Castleden et al. 2011); mental health and illnesses (Mannion 1996; Rutten et al. 2013); family stress and resilience (Hawley and DeHaan 1996); and human vulnerability and the role of markets during and after natural disasters (Baker 2009). Resiliency refers to "the capacity to bounce back, to withstand hardship and repair oneself" (Wolin and Wolin, 2010, p. 3); and reflects "the capacity to rise above adversity . . . and forge lasting strengths in the struggle" (Marano 2003). While resiliency is typically explored in the context of pathological settings or extraordinary events, resilience is also evident in everyday settings, and is key for successful consumption experiences (Ball and Lamberton 2015). We build on Ball and Lamberton's (2015) assertion that consumer resilience is a critical yet unrecognized element in the mental acumen needed for successful marketplace experiences. Thus, consumers with disabilities are an ideal context to study such resilience.

Traditionally, researching such populations comes with a set of challenges that interviews alone are unable to overcome. For example, although long-term disabled consumers may elicit highly reflexive responses needed to understand a topic like resilience, newly disabled-consumers may not have had time to adapt or process their experiences, rendering narratives that may require more in-depth analysis or sense-making capacity. Moreover, disabled consumers often do not experience everyday life in isolation, in that there may be caretakers, family members, and support networks that constitute the cultural backdrop in which marketplace experiences are enacted, potentially serving as mental reprieve/support. Thus, it becomes critical to capture and analyze the narratives of resilience and the discourses in which those narratives are embedded. As such, this study examines the following research questions: 1) what are the discourses of resilience in the context of lived disabled experiences? and 2) what are the strategies and tactics individual consumers employ to build such resilience and combat mental stresses in the marketplace?

This study uses a mixed method approach, combining automated textual analysis, discourse analysis, and grounded theory analysis. Our data consists of existing data that were taken from the 2016 to 2018 New York Times "Disability" series; a weekly compilation of "essays, art and opinion by and about people living with disabilities," comprising 77 articles over 29 months, each ranging between 1500 – 2000 words of text. Initial findings are corroborated with deeper insights derived from a set of interviews, also analyzed using a grounded theory approach, with individuals who self-identify as disabled. These interviews incorporate discussion stems as a type of projective technique to stimulate our understanding. This combination of data collection and analytic techniques allowed the researchers to synergistically explore emerging themes related to their perceptions of themselves as part of the marketplace, the paradox of being invisible and hyper-visible, and the strategies that consumers enact to develop resilience. Through these paradoxical experiences, consumers adjust in ways that help them to resist, accept, fit in, stand out, preempt, react, empower themselves, and/or disempower negative marketplace experiences, as they seek to build both physical and mental resilience.

Promoting Consumer Mental Wellness Through Emotion Regulation Strategies

EXTENDED ABSTRACT

Each year, 1 in 11 adolescents and young adults have a major depressive episode in the United States (Mojtabai, Olfon and Han 2016). Moreover, according to the National Institute of Mental Health, an estimated 31.9% of adolescents have had an anxiety disorder (National Comorbidity Survey 2017). Several environmental factors may help to contribute to high levels of anxiety and depression in young people (i.e., Generation Z, Millennials). However, as young people negotiate a life on social media, they may begin to evaluate themselves using excessively high standards and adopt self-perfectionism tendencies. Broadly defined, self-perfectionism involves very critical evaluations of the self. Perfectionism may also come from others and may manifest as socially prescribed perfectionism (Paik and Sanchagrin 2013; Twenge 2000). Researchers have found that young adults are reporting higher levels of socially prescribed perfectionism than previous generations (Curran and Hill 2017). This rising perfectionism is also associated with anxiety, greater physiological reactivity, and a sense of social disconnection. This research contributes to the existing literature by examining how emotion regulation strategies can help effectively manage negative emotions. Importantly, this research highlights how marketing

mechanisms, especially social marketing, can help to facilitate effective emotion regulation.

Anxiety is characterized by anticipation of future danger or misfortune, which is accompanied by a feeling of "dysphoria or somatic symptoms of tension" (American Psychiatric Association 2000, p.820). Anxiety is an unresolved fear or a state of undirected arousal. Anxiety may also be referred to as generalized anxiety, which can involve excessive worry about things such as personal health, work, social interactions, and everyday life circumstances (National Institute of Mental Health 2019). People with anxiety disorders frequently have intense, excessive and persistent worry and fear about everyday situations. Often, anxiety disorders involve repeated episodes of sudden feelings of intense anxiety, fear or terror that reach a peak within minutes (panic attacks).

Emotion regulation refers to the processes by which individuals influence which emotions they have, when they have them, how they experience them and how they express these emotions. Emotion regulation strategies may be antecedent-focused, occurring before a full emotional reaction, or response-focused, taking place after a full emotional response has been prompted (Gross 1998). Research has found that antecedent-focused strategies often accompany greater emotional well-being and are considered adaptive (Gross and John 2003).

One common antecedent-focused emotion regulation strategy is cognitive reappraisal. Cognitive reappraisal is a form of cognitive change that involves construing a potentially emotion-eliciting situation in a way that changes its emotional impact (Lazarus and Alfert 1964). For example, if repairing a home due to a flooding incident, one might view the event as an opportunity to do some decorating and give a home a facelift, as opposed to lamenting what was destroyed in the home. Because reappraisal occurs early, it can modify the entire emotional sequence before emotion response tendencies have been fully generated.

In contrast, expressive suppression is a response-focused emotion regulation strategy. It involves inhibiting the behavioral expression of an emotion (Gross 1998). For example, one might keep a poker face while holding a great hand during a card game (Gross and John 2003). Expressive suppression comes relatively late in the emotion-generative process and changes the behavioral aspect of the emotion response tendencies without reducing the experience of negative emotion. Additionally, suppression requires the individual to effortfully manage emotion response tendencies. Such efforts of suppression may lead to negative feelings about the self and alienate the individual from others, preventing the development of emotionally close relationships (Sheldon et al. 1997).

To explore this domain, a single factor (emotional regulation strategy: cognitive reappraisal, expressive, control) between-subjects design was conducted using an online, non-student consumer panel (n=96). Sixty-eight percent of participants were male and 32% were female. Study participants belonged to the Millennial and Gen Z cohort, ranging in age from 22 to 35 (M= 27). Participants were told to spend at least three minutes writing about a public speaking appearance which made them anxious. The purpose of this exercise was to induce anxiety. Next, study participants viewed one of three advertisements (randomly assigned) which promoted an emotion regulation strategy—cognitive reappraisal, expressive suppression, or an advertisement non-emotional in nature. The advertisement that promoted cognitive reappraisal included the following message, "It's okay to be nervous and anxious… Feeling nervous and doing it anyway makes us stronger." In contrast, the message which encouraged expressive suppression featured the following verbiage: "A little nervous and anxious? Don't let them see you sweat!" Finally, the

control condition featured an advertisement for a fictitious brand of detergent. Findings indicated that individuals in the cognitive reappraisal condition (M=3.91) exhibited the most positive feelings and more effective emotion regulation than the expressive suppression (M=3.39) and control conditions (M=3.72, (F (1,92) = 3.3, p<.05). These results can be used by institutions (e.g., schools) to develop proactive strategies to reduce anxiety and other mental health issues. Social stigmas regarding mental health can be removed and replaced by a more preemptive stance in promoting healthy coping behaviors while managing negative emotions.

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New Directions in Hedonic and Utilitarian Consumption

Chairs: Uzma Khan, University of Miami, USA
Colton Pond, University of Miami, USA

Paper #1: Role of Hedonic Choices in Sequential Decision-Making

Uzma Khan, University of Miami, USA
Colton Pond, University of Miami, USA
Ravi Dhar, Yale University, USA

Paper #2: The Effect of a Temporal Separation Between Choosing and Buying on Purchase Incidence

Gabriela N. Tonietto, Rutgers University, USA
Selin A. Malkoc, The Ohio State University, USA
Stephen M. Nowlis, Washington University in St. Louis, USA
Zhenling Jiang, Washington University in St. Louis, USA

Paper #3: Influence of Hedonic versus Utilitarian Framing on Donation Behavior

Shelly Rathee, University of Utah, USA
Arul Mishra, University of Utah, USA
Himanshu Mishra, University of Utah, USA

Paper #4: The Effect of Anticipating Regret and Satisfaction on Hedonic vs. Utilitarian Choice

Eunice Kim, Pennsylvania State University, USA
Min Zhao, Boston College, USA

SESSION OVERVIEW

Hedonic and utilitarian choices have received significant interest in recent consumer behavior research (c.f., Alba and Williams 2013). However, most research has focused on the antecedents of hedonic and utilitarian purchases and how consumers justify hedonic purchases that tend to be more guilt-inducing (see Khan et al. 2005 for review). The current session presents four papers that push the boundaries of research in this area. Some of the questions raised in this session include, whether hedonic (vs. utilitarian) products effect shopping momentum and shopping cart abandonment differently; do hedonic (vs. utilitarian) initial purchases lead to more extreme or more tampered subsequent purchases; whether considering hedonic (vs. utilitarian) sacrifices influence donation appeals? And how anticipation of regret shifts consumer preferences between hedonic and utilitarian products depending on whether the consumption is near or far. By answering these novel questions, the current session not only sheds light on an important consumer area but also generates directions for further research on hedonic and utilitarian consumption.

The first paper by Khan et al. proposes that an initial hedonic purchase induces a justification mindset, which carries over to subsequent choices. As a consequence, the authors show that an initial hedonic purchase magnifies the compromise effect, reduces purchase momentum, and, ironically, increases the choice share of the most indulgent option in a subsequent choice set when this option is easier to justify. The second paper by Tonietto et al. examines how hedonic vs. utilitarian products fare in shopping cart abandonment decisions. They find that hedonic products are more likely to be abandoned if there is a temporal separation between when the product is added to the cart and when the final purchase decision is made. This finding generates important recommendations for online retailers of hedonic products. The third paper by Rathee at al. shows that the level of perceived sacrifice in altruistic decisions depends on whether people are led to believe they are giving up something hedonic versus utilitarian by their action. For example, individuals perceive a greater sacrifice and are more likely to donate if they are told that donating $2 is like giving up a Fruit Salad (utilitarian) versus giving up a Blueberry Muffin (hedonic)". The last paper by Kim and Zhao examines how the temporal dimension of a decision and anticipating regret interacts to determine consumers preference for hedonic versus utilitarian options. They show that anticipating regret reduces (increases) the share of hedonic options when the choice is near (far). These findings shed a nuanced light on the role of anticipated regret in consumer choices.

Considering the relevance of hedonic and utilitarian products within the current marketplace, we expect that the session will be of interest to researchers as well as practitioners interested in self-control, sequential choices, consumer well-being, pro-social behavior and decision-making more generally. This session fits within the Becoming Wise conference theme through creating new wisdom by holistically expanding the hedonic and utilitarian choice literature.

Role of Hedonic Choices in Sequential Decision-Making

EXTENDED ABSTRACT

Everyday consumer choices involve both hedonic and utilitarian products. Hedonic products are consumed for pleasure, while utilitarian products serve functional tasks (Hirschman and Holbrook 1982). Hedonic purchases are often accompanied with guilt. Hence their choice can be enhanced if a justification is provided before consumption (see Khan et al. 2005 for review). Most prior research on hedonic consumption has however focused on how consumers decide whether or not to purchase a hedonic or utilitarian product, and less work has sought to understand downstream consequences of a hedonic or utilitarian choice. The current research bridges this gap.

Because individuals often seek to justify their decisions, and hedonic purchases are inherently more guilt-inducing and difficult to justify, we propose that a hedonic purchase triggers a justification mindset. A mindset is a cognitive schema that upon activation can persist through thought production, information retrieval, and eventually behavior, even in unrelated tasks (Gollwitzer 1990). Hence, we posit that a justification mindset triggered by a hedonic purchase will impact subsequent unrelated choices in systematic ways. We test this notion that a hedonic initial purchase induces a justification mindset in six studies by exploring how an initial hedonic versus utilitarian purchase influences downstream choices.

We start by providing initial evidence that purchasing a hedonic product induces a justification mindset by examining consumers reasons for their choice. We posit that individuals in a justification mindset should give more reasons/justifications for their choices. In Study 1, online participants (N=253) were presented with either a hedonic or utilitarian backpack and decided whether or not to purchase the backpack. Subsequently, all participants listed the reasons why they did or did not purchase the backpack. As predicted, participants who decided to purchase a hedonic (vs. utilitarian) backpack listed more reasons ($4.65_{hedonic\text{-}backpack}$ vs. $3.56_{utilitarian\text{-}backpack}$, $t(131.1)=3.171$, $p=.003$), but there was no difference in the number of reasons for those who did not purchase a backpack. Thus, the guilt induced from a hedonic purchase placed individuals in a state where justifications/reasons were more readily available. Next, we examined downstream consequences to see if this justification state induced by an initial hedonic purchase persists in subsequent choices.

Consumers often choose a middle or compromise option (Simonson 1989) as it tends to be easier to justify. We, therefore, predict that an initial hedonic purchase will subsequently increase the likelihood to choose the middle option, i.e., the compromise effect. In Study 2, participants (N=375) were first asked to imagine purchasing an expensive pair of shoes, either for a job interview (utilitarian), a party (hedonic), or no shoe manipulation (control). Then, in a supposedly unrelated task, participants chose between three cruise options that involved a price-quality trade-off. To test for the compromise effect, we computed the choice share of the middle option relative to both extreme options. There was a non-significant compromise effect in the control ($38.9\%_{control-shoes}$) and utilitarian conditions ($39.7\%_{utilitarian-shoes}$), but a significant compromise effect in the hedonic condition ($50.4\%_{hedonic-shoes}$, $x^2(2)=16.439$, $p=.00003$).

Study 3 provides evidence for a justification mindset by examining the choice for self versus others. Individuals in a justification mindset should subsequently select a utilitarian product when making a personal choice. However, hedonic options may be easier to justify for others particularly when choosing for a friend. Participants (N=428) were first asked to imagine purchasing a pair of shoes either for a job interview (utilitarian) or a party (hedonic). Next, they indicated their preference between a gift-card to The Cheesecake Factory (hedonic) and a gift-card to Walmart (utilitarian) either for themselves or to give to a friend. As expected, when the initial choice of shoes was framed as hedonic (vs. utilitarian) the share of The Cheesecake Factory was significantly lower when the participants choose the gift-card for themselves ($15.1\%_{hedonic-shoes}$ vs. $27.8\%_{utilitarian-shoes}$, $x^2(1)=5.259$, $p=.022$), but not when gift-card was chosen for a friend ($24.7\%_{hedonic-shoes}$ vs. $24.6\%_{utilitarian-shoes}$).

Study 4 examined implications of a justification mindset when the subsequent choice set contains only hedonic options. In such choice sets, an extreme indulgent option may be easier to justify than moderately indulgent options because it provides maximum goal attainment and a better reason for choice (Goldsmith and Dhar 2010). Hence, we predict that a hedonic (vs. utilitarian) initial purchase will result in greater share for the most indulgent option when all items are hedonic. Furthermore, we distinguish between tightwads and spendthrifts. Tightwads (versus spendthrifts) feel pain of payment from minimal purchases and readily experience guilt (Rick et al. 2007). Thus, they may be in a justification mindset by default. Hence, we predict that spendthrifts will be more affected by an initial hedonic (vs. utilitarian) purchase. Participants (N=677) viewed either a hedonic or utilitarian backpack and were asked to imagine purchasing it. Next, participants selected between two luxury cruise options, with one option higher in price and luxurious features. Then participants completed a three-item tightwad-spendthrift scale. As predicted, spendthrifts were more likely to choose the more indulgent option after purchasing an initial hedonic item ($54.8\%_{hedonic-backpack}$ vs. $35.7\%_{utilitarian-backpack}$, $p=.003$), but tightwads did not show such an increase ($22.9\%_{hedonic-backpack}$ vs. $29.3\%_{utilitarian-backpack}$).

Study 5 examines the effect of a hedonic versus utilitarian initial purchase on the shopping momentum effect. Dhar et al. (2007) showed that an initial purchase can cause shopping momentum whereby increasing the likelihood of subsequent unrelated purchases. We suggest that if an initial purchase is hedonic, it will attenuate shopping momentum by inducing a justification mindset. Participants (N=117) were given an opportunity to purchase either a hedonic (fidget spinner), utilitarian (notebook), or no initial item. Subsequently, all participants were given an opportunity to purchase M&Ms. As expected, purchase of a notebook increased the purchase likelihood of M&Ms ($75.0\%_{utilitarian}$ vs. $44.7\%_{control}$), but an initial

purchase of an equally priced fidget spinner did not ($47.1\%_{hedonic}$ vs. $44.7\%_{control}$; $x^2(2)=8.69$, $p=.013$).

The current research is the first to provide evidence for a justification mindset induced by an initial hedonic purchase that has consequences on downstream behavior. Prior work within hedonic-utilitarian choices primarily investigates isolated decision-making, while the current research takes a more holistic perspective through understanding how hedonic choices influence consumers' consumption journey.

The Effect of a Temporal Separation Between Choosing and Buying on Purchase Incidence

EXTENDED ABSTRACT

Consumers shopping online often leave the contents of their cart unpurchased—a behavior known as shopping cart abandonment. The present research identifies one psychological driver of abandonment. We examine situations in which consumers first make product selections and then make a final purchase decision either immediately or after an interval of time. We propose that experiencing a temporal separation when considering hedonic products produces a mismatch between consumers' foci during choice and purchase. In particular, because hedonic products are affect-rich and tempting (O'Curry and Strahilevitz 200; Shiv and Fedorikhin 2002), at the choice stage, consumers rely on their temptations. If the purchase decision immediately follows, consumers' purchase focus is still on temptations. However, temptations fade over time (Wang et al. 2011) and are often replaced by guilt, making it harder to justify a purchase (Kivetz and Simonson 2002; Okada 2005) and leading to cart abandonment. Conversely, choice of utilitarian purchases is generally based on reasons (Dhar and Wertenbroch 2000) – a focus unlikely to change over time.

Seven studies support a dual-process model such that hedonic (vs. utilitarian) products are uniquely prone to abandonment. Further, while maintaining affect/temptations throughout the temporal separation decreases shopping cart abandonment, focusing on reasons increases it. Finally, we provide experimental evidence for one practical way that marketers may reduce abandonment of hedonic products.

Study 1 utilized a dataset from an online retailer that included 6.8 million browsing records from 1.3 million consumers. We compared the conversion rates of two hedonic product categories (veils and gift cards) to that of three utilitarian categories (diapers, fishing poles, and laptop cords), which were confirmed by a pretest. Overall, hedonic products had lower conversion rates (veils=11.8%, gift cards=7.0%) compared to utilitarian products (diapers=15.0%, fishing poles=18.4%, laptop cords=30.67%; all ps<.001 compared to each hedonic category). Building on this, in the remaining studies, we experimentally test the role of temporal separation in situations when items have been added to one's shopping cart.

Study 2 followed a 2(hedonic, utilitarian) x 3(temporal separation: absent, 10-minute, 2-day) design. Participants first completed a shopping task in which they imagined that they were shopping online for five different products that were all either hedonic or utilitarian. For each product category, participants were provided with an assortment of three options and selected one of the options from each of the product categories to add to their shopping cart. Then either immediately, after a ten-minute interval, or after a 2-day interval, participants returned to their cart and indicated whether they would purchase each. We found the predicted interaction. For hedonic products, experiencing a delay of 10 minutes (M=2.26 out of 5) or two days (M=2.32) decreased purchase compared to when pur-

chase immediately followed choice (M=2.98, both ps<.05). However, participants were similarly likely to purchase utilitarian products irrespective of a temporal separation ($M_{10Minutes}$=3.44, M_{2Days} = 3.16, M_{Absent}=3.39, all ps>.10).

Study 3 replicated the effect of a temporal separation on hedonic purchases using an incentive-compatible design. Participants were given $2, physically shopped for four 50-cent hedonic items in our lab and made purchase decisions immediately or after a 10-minute delay by actually paying the researcher. Replicating Study 2, participants who experienced a temporal separation purchased fewer hedonic items (M=1.15 out of 4) than those who did not (M=1.61, p<.05)

Studies 4a-4b next tested the role of feelings and reasons. As in Study 2, participants in Study 4a added five hedonic products to their cart and made purchase decisions immediately or after a 10-minute delay. Finally, participants indicated how focused they were on temptations (e.g., having fun) and reasons (e.g., being practical) while making their purchase decisions. Once again, participants bought significantly fewer hedonic products following a temporal separation ($M_{Present}$ =1.87 out of 5, M_{Absent}=2.40, p = .014). Importantly, participants who experienced a temporal separation reported basing their purchase decisions less on feelings ($M_{Present}$=4.43, M_{Absent}=4.99, p<.01), but equally on reasons ($M_{Present}$ = 5.18, M_{Absent} = 5.32, p>.10). Thus, temptations uniquely faded over time.

Building on this, Study 4b examined the effect of focusing on temptations versus reasons in the absence of a temporal separation in a 3-cell (temptation, reasons, control) design. As in prior studies, participants added five hedonic products to their shopping cart. Those in the control condition immediately made their purchase decisions, while those in the other conditions first responded to two questions directing their attention to either temptation (e.g., "how exciting are the items?") or reasons (e.g., "how much do you need the items?"). Focusing on reasons reduced purchase (M=1.84 out of 5) compared to the temptation (M=2.56, p<.05) and control conditions (M=2.71, p<.01), which did not differ.

Finally, Studies 5a-5b tested the efficacy of retargeting in recovering abandoned hedonic products. Study 5a followed a 3-cell (temporal separation: absent, present, retarget) design. Participants first added five hedonic products to their shopping cart. Those in the absent condition then made purchase decisions immediately while participants in the other two conditions first performed a 10-minute filler task in which they browsed a hypothetical Facebook page with videos. In the retarget condition, participants saw their previously chosen items in a banner ad on the side of the video during part of the temporal separation. Those in the separation present condition instead saw an ad unrelated to their previous choices. As predicted, those in the temporal separation condition bought fewer of the items (M=1.89 out of the 5) than those in the absent (M=2.58; p = .057) and retarget conditions (M=2.52; p = .079), which did not differ. By potentially maintaining temptation during the separation, retargeting can increase purchase.

Finally, Study 5b followed a 2(hedonic, utilitarian) x 2(temporal separation, retarget) design. The same operationalization of retargeting was used as in Study 5a. Replicating Study 5a, for hedonic products, participants purchased more items if the temporal separation contained a retargeting ad ($M_{Separation}$=2.19, $M_{Retarget}$=2.92, p=.02). However, there was no such difference for utilitarian products ($M_{Separation}$=3.62, $M_{Retarget}$=3.33, p>.10).

Our results demonstrate that hedonic products are particularly likely to be abandoned, support a dual process model, and provide a meaningful intervention to help recover hedonic purchase.

Influence of Hedonic versus Utilitarian Framing on Donation Behavior

EXTENDED ABSTRACT

Past research suggests that altruism is associated with making people feel good about themselves, gaining the respect of others, or perhaps even leading to a tax benefit (Andreoni 1990; Hardy and Vugt 2006; White and Peloza 2009). However, if one considers a donation as a transaction, then it essentially involves incurring costs and forfeiting benefits. Every time people engage in a virtuous act, they give up something. Therefore, altruism requires making a sacrifice for others. In this research, we focus on the sacrifice aspect of donation – when the cost of forgoing something is subjectively felt.

This research examines consumer's willingness to donate when asked to "give up" a monetary amount that is equalized to the price of a product (similar to penny-a-day, Gourville 1998, 1999). We specifically focus on equating hedonic versus utilitarian foods in the "giving up" donation appeal. For instance, "Please Donate $2. Note, $2 is the same as *giving up* a Blueberry Muffin (or Fruit Salad)".

Our main proposition is that equating a similarly priced food during a *giving up* appeal can change the sacrifice perception and thereby influence donation likelihood. Specifically, we propose that consumers would be more likely to donate if the donation is equated to utilitarian rather than hedonic food or even when there is no reference to food. Because utilitarian foods elicit lower positive affect than hedonic food (Shiv and Fedorikhin 1999), people feel that they are sacrificing less and hence are willing to donate more. The pinch of giving up is less with equating to utilitarian foods.

The main objective of study 1 was to investigate the influence of utilitarian food appeal when asked to donate their own money. We used a 2-cells (utilitarian vs. hedonic) between-participants design. Two tables were set up in the business school lobby. The first table had a poster about the charity, Utah Food Bank, where the research assistant helped to solicit the donations. While, the second table, few feet apart had a donation box so that participants could donate without any interference. People passing by were approached for the donation with an envelope. They saw either utilitarian appeal, "Note, $2 is the same as giving up a pack of graham crackers", or hedonic appeal, "Note, $2 is the same as giving up a pack of chocolate chip cookies". Results showed that reference to graham crackers significantly increased donation rates above the chocolate chip cookies condition ($P_{utilitarian}$ = 44%, $P_{hedonic}$ = 25%, Chi-Square = 4.02, p = .04).

We used a 2-type of appeal (giving up vs. acquisition) x 2-reference food manipulation (utilitarian vs. hedonic) between-participants design. Prior research focuses on the asymmetric impact of acquisition and forfeiture decisions. That is, a forfeiture appeal is foreseen as foregoing (cost) attributes, whereas, an acquisition appeal (e.g., $5 is how much it costs to *buy* 6-granola bars) is foreseen as gaining attributes (Carmon and Ariely 2000). Therefore, we expected opposite results with these two types of appeals. Results showed evidence for our proposition in the giving up appeal, a higher willingness to donate with reference to granola bars than donuts ($M_{utilitarian}$ = 4.84, $M_{hedonic}$ = 3.47, F(1, 90) = 14.15, p < .0001). Whereas in acquisition appeal, there was lower willingness to donate with granola bars ($M_{utilitarian}$ = 3.58, $M_{hedonic}$ = 4.37, F(1, 76) = 4.05, p = .04) than donuts (consistent with Savary, Goldsmith, and, Dhar 2015). Specifically, we observed that sacrifice concept was activated for giving up appeal ($M_{utilitarian}$ = 2.51, $M_{hedonic}$ = 3.42, F(1, 90) = 7.31, p < .01), but not for acquisition appeal ($M_{utilitarian}$ = 3.00, $M_{hedonic}$ = 3.02, F(1, 76) = .001, p = .94).

We used a 3-cell (hedonic vs. utilitarian vs. control) between-participants design. The objective of Study 3 was to provide ad-

ditional evidence for the sacrifice account. Sacrifice as we suggest refers to a subjective feeling of foregoing something (Powell and Van Vugt 2003). We wanted to test the potential account of cost (monetary value) perception. One could argue that sacrifice is only a component of cost, and that there is no difference between the two. The results showed that there was higher willingness to donate with Quaker Oats compared to Magnum Ice Cream bars appeal ($M_{utilitarian}$ = 4.97, $M_{hedonic}$ = 4.28, $F(1, 83)$ = 3.52, p = .06) and control ($M_{utilitarian}$ = 4.97, $M_{control}$ = 4.19, $F(1, 94)$ = 6.35, p = .01). Further, sacrifice perception mediated (β = -.18, 95% CI [-.384, -.017]) our results. However, when participants completed cost valuation of donation amount, indicating how low or high was the value of $4 to them (1 = Extremely low, and 7 = Extremely high), we found no significant effect ($M_{utilitarian}$ = 2.66, $M_{hedonic}$ = 2.52, $M_{control}$ = 2.71, p > .10).

We used a 2-food reference (utilitarian vs. hedonic) x 2-product claim (organic vs. regular) between-participants design. With the manipulation of organic claim, we tested for the change in the affect for utilitarian food, which affects sacrifice perception and thus donation rates. An organic claim leads to higher perceived tastiness of utilitarian foods than hedonic foods (Shin 2009). Participants received $1 as compensation for this study, and the dependent variable was the choice to donate or not donate this $1 upon viewing the donation appeal. A logistic regression revealed significant interaction (Wald Chi-Square = 5.23, p = .02) on donation rates. Specifically, in the regular claim condition, pumpkin seeds significantly increased donation rates ($P_{utilitarian}$ = 90%, $P_{hedonic}$ = 70%, Chi-Square = 6.25, p = .01) than the pumpkin cupcake appeal. However, in the organic claim condition, there was no-difference in donation rates ($P_{utilitarian}$ = 74%, $P_{hedonic}$ = 80%, Chi-Square = .50, p = .47).

Despite the positive connotations of benevolence and kindness about altruism, it is also an act of sacrifice. In fact, a sacrifice made for others makes benevolence possible. In this article, we examine how individuals try to reduce sacrifice perception associated with the acts of helping.

The Effect of Anticipating Regret and Satisfaction on Hedonic vs. Utilitarian Choice

EXTENDED ABSTRACT

Researchers and marketers have focused primarily on satisfaction and regret as post-decision measures and on what leads to customer satisfaction and regret. A question that tends to be overlooked is how anticipating satisfaction and regret prior to making a decision influences consumer preferences and choices. We compare the anticipation of regret with the anticipation of satisfaction and examine how they differentially affect consumer preference for hedonic versus utilitarian options.

Prior research suggests that anticipating satisfaction increases preference for options that are easier to imagine (Dhar and Wertenbroch 2000; Shiv and Huber 2000)—such as salient product options or features in a decision context (e.g., van Osselaer and Janiszewski 2012). Prior work on anticipating regret offers mixed findings. On the one hand, for near-future decisions (where a short-term goal is more salient and indulgent options are the naturally preferred default option), individuals who anticipate regret prefer options with long-term benefits (Bakker et al. 1997; Hetts et al. 2000; Richard et al. 1996); however, for distant-future decisions (where a long-term goal is more salient, and options with greater long-term benefits are the default option), individuals who anticipate regret prefer indulgent options (Keinan and Kivetz 2008; Simonson 1992).

Building on these findings, we propose that anticipating satisfaction pushes consumer preferences towards the naturally preferred

or default option while anticipating regret shifts consumer preferences toward the naturally less preferred option. More specifically, when the salient goal is short-term indulgence, consumers who anticipate regret prior to making their decision prefer utilitarian, virtuous options, whereas when the salient goal is long-term benefit, they prefer hedonic, indulgent options. Furthermore, as regret stems from counterfactual comparisons between the chosen option and the foregone option (Zeelenberg and Pieters 2007), we propose that while anticipating satisfaction tends to focus individuals on the positives of the chosen option, anticipating regret tends to focus individuals on the negatives of the default option and the positives of the alternate option. As a result, anticipating regret shifts preferences away from the default option.

Study 1 (N = 114) demonstrates the basic effect in a near future choice between two potential weekend activities: watching TV vs. going to the gym. Since individuals tend to focus on immediate benefits such as pleasure for near future decisions (Trope and Liberman 2003), watching TV would be the default option. Prior to rating the attractiveness of each option, participants anticipated how satisfied they would feel if they were to choose that activity, how much regret they would feel if they were not to choose that activity or did not anticipate anything. As a measure of considering non-salient decision aspects, they also rated the extent to which future concerns influenced their evaluations. As expected, the attractiveness of the options varied across the three conditions (F (2, 111) = 3.99, p =.02). Participants in the regret condition found the default TV option less attractive than the gym option compared to those in both the satisfaction and the control conditions. Similarly, thoughts of the future (i.e., long-term focus) differed across the three conditions (F (2, 111) = 2.91, p =.06), and it mediated the effect of anticipation type on preference.

Study 2 examined the effect in both near-future and distant-future decisions. The study was a 2 (anticipation type: satisfaction vs. regret) x 2 (time frame: tomorrow vs. three months later) between-participants design (N = 90). Participants imagined a dinner party that would take place tomorrow (three months later) and indicated their dessert preference between cheesecake and fruit. Prior research shows that individuals tend to focus on short-term pleasures for near future decisions and focus on long-term goals for distant future decisions (Trope and Liberman 2003). Therefore, the cheesecake (fruit) would be the default preference for the near (distant) future. Prior to deciding, participants anticipated the satisfaction (regret) with choosing (not choosing) each option in turn. As expected, we found a significant anticipation type x time frame interaction on preference (p=.006). When the decision was for the near future, those anticipating regret were less likely to prefer the cheesecake compared to those anticipating satisfaction (p=.05); however, when the decision was for the distant future, those anticipating regret were more likely to prefer the cheesecake compared to those anticipating satisfaction (p=.05).

Study 3 replicated the findings in a choice between steak and healthy pasta for tomorrow vs. three months later (N = 318). More importantly, we found that anticipating regret (vs. satisfaction) increased participants' consideration of the negatives of the default option (p<.01) and the positives of the non-default option (p<.01), which mediated the effect of anticipation type on preference.

Next, we used goals to determine the default option in a choice set. Study 4 was a 2 (goal: studying vs. socializing) x 2 (anticipation type: satisfaction vs. regret) between-participants design (N = 96). After participants were primed with a goal, they were presented with a choice between going to class or having lunch with a friend. For those primed with the studying (socializing) goal, class (lunch) was the default option. Participants anticipated the satisfaction (regret)

with choosing each of the options in turn, then indicated which activity they preferred. As expected, we found a significant interaction on preference (p=.01). Among those primed with studying, those anticipating regret were more likely to prefer lunch compared to those anticipating satisfaction (p=.03); however, among those primed with socializing, those anticipating regret were less likely to prefer lunch compared to those anticipating satisfaction (p=.1).

Taken together, our findings contribute to the existing literature on self-control, satisfaction, and regret. We demonstrate that anticipating satisfaction (vs. regret) plays a critical role in self-control. When indulging is the default, anticipating regret can enhance self-control, but can worsen self-control when indulging is not the default. Our framework of regret being able to highlight the naturally ignored decision aspects also offers a potential explanation to reconcile the contradictory findings in the regret literature.

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How Could You Do That?!
Consumers' Differential Reactions to Companies Treating Others Badly…or Better

Chairs: Nari Yoon, Indiana University, USA
Jenny G. Olson, Indiana University, USA

Paper #1: Brand Perceptions and Consumer Support in the Face of a Transgression: Warmth Over Competence

Summer Hyoyeon Kim, University of Kansas, USA
Yexin Jessica Li, University of Kansas, USA
Jenny G. Olson, Indiana University, USA
Shailendra P. Jain, University of Washington, USA

Paper #2: Putting the Harm Back into Product-Harm: Vulnerable Social Groups, Harm Perceptions, and Consumer Complaining Behavior

Steven Shepherd, Oklahoma State University, USA
Alysson E. Light, University of the Sciences, USA

Paper #3: How Consumer Brand Sabotage Affects Observing Consumers: Buffering versus Amplifying Effects of Consumers' Prior Self-Brand Connections

Andrea Kähr, University of Bern, Switzerland
Bettina Nyffenegger, University of Bern, Switzerland
Mansur Khamitov, Nanyang Technological University, Singapore
Harley Krohmer, University of Bern, Switzerland
Wayne D. Hoyer, University of Texas at Austin, USA

Paper #4: Should I Stay or Should I Go: When Our Companies Have Eyes for Other Consumers

Nari Yoon, Indiana University, USA
Jenny G. Olson, Indiana University, USA
Adam Duhachek, Indiana University, USA

SESSION OVERVIEW

In an era of enhanced social media engagement and heightened activism, consumers are more aware than ever of company transgressions (e.g., product malfunctions, immoral behaviors, seemingly unfair promotions) and their implications for various consumer groups. This session is centered on the following questions: 1) how do consumers respond to firms that misbehave toward consumers or treat others differently (for better or for worse) and 2) what are the downstream consequences for brand perceptions and consumer loyalty? Specifically, the four papers shed light on consumers' differential reactions to company actions that bring harm upon consumers, provide benefits to some consumers over others, and provoke consumers to sabotage the brand. The session contributes to the emerging literature on consumer responses in the age of information by highlighting research that focuses on explicit or perceived company transgressions and their effects on attitudes, word of mouth, and purchase behavior.

In the first paper, Kim et al. demonstrate that customers react differently to brand transgressions depending upon their perceptions of the brand along warmth and competence dimensions. When a brand harms others by violating societal moral standards, Kim et al. find that consumers are more likely to support brands positioned as warm (vs. competent) due to a moral decoupling process whereby observers separate judgments of character from judgments of brand performance. In the second paper, Shepherd and Light find that firms are judged more harshly when they treat specific consumer groups badly. In particular, violating vulnerable consumers' (e.g., women, children, the elderly) rights results in greater backlash and more negative firm perceptions. In the third paper, Kähr et al. demonstrate that

witnessing *other* consumers engage in brand sabotage in response to a brand's transgressions increases negative firm perceptions among observers. Observers' own self-brand connections are shown to play an important role in their responses to value-based versus performance-based brand sabotage. In the final paper, Yoon, Olson, and Duhachek provide evidence that firms can be viewed negatively by merely offering differential incentives to consumers. Although firms frequently engage in promotional activities designed to attract new customers (e.g., special discounts), these efforts can alienate existing customers by triggering feelings of betrayal.

This year's conference theme is "Becoming Wise." Collectively, this session expands current wisdom by applying well-established theories to understand modern marketplace realities. Due to technological advances and increased digitalization, today's consumers have infinite access to information about companies and their latest practices. Moreover, consumers have the power to share their experiences with firms directly (positive or negative) to a wider audience and observe how other consumers are being treated by firms. In other words, consumers' relationships with companies are becoming increasingly driven by social comparison processes among consumers (i.e., we can see what others are, and are not, getting) or higher expectations (i.e., we demand greater protection of vulnerable consumers). We expect this session to appeal to a broad audience, including researchers interested in customer-brand relationships, brand transgressions, social comparison processes, and product/service failure.

Brand Perceptions and Consumer Support in the Face of a Transgression: Warmth Over Competence

EXTENDED ABSTRACT

Brands may be seen as warm and/or competent, two dimensions which are fundamental to social perception (Fiske et al. 2002). The level of warmth signals intentions to harm another entity, and the level of competence signals the ability to act on those intentions (Fiske, Cuddy, and Glick 2007). Even though the theoretical model (i.e., the Stereotype Content Model; Fiske et al. 2002) was developed in the context of intergroup perception, additional research demonstrates that these perceptions also apply to brands (Aaker, Vohs, and Mogilner 2010; Kervyn, Fiske, and Malone 2012). Research on firm stereotypes shows that competence perceptions are more influential on consumer support (Aaker et al. 2010; Aaker, Garbinsky, and Vohs 2012). Warmth alone was not enough to improve purchase intentions; however, when competence perceptions were boosted, so was consumers' likelihood of purchase.

Perceptions of warmth and competence may provide differing leverage for brands following a transgression (i.e., harmful and/or deceitful behavior). For example, research suggests that brand warmth leads to greater consumer-brand identification, which in turn increases brand loyalty and brand advocacy (Stokburger-Sauer, Ratneshwar, and Sen 2012). Also, given that competence signals ability, it may be difficult for consumers to justify a transgression, since a competent brand should have had the ability to prevent the mishap. Similarly, considering that warmth signals intentions, consumers may find it easier to justify a transgression by a company that they perceive to have positive intentions (e.g., by considering it a one-time incident). In order to accomplish this and continue support,

consumers may be motivated to use various tactics such as moral rationalization (i.e., the re-construal of a negative event as being less negative) or moral decoupling (i.e., separating judgments of morality from judgments of brand performance; Bhattacharjee, Berman, and Reed 2013). Therefore, we predict that following a transgression, consumers will support a warm (vs. competent) brand more (H1). We also predict that consumers will engage in more rationalizing and decoupling for a warm brand's "bad" behavior (H2), and that these strategies will underlie the link between warmth and support (H3).

Brand perceptions may have implications for recovery efforts, which may include actions such as offering discounts to benefit consumers directly or offering donations to benefit the wider community. While both efforts are beneficial, the same action may be perceived differently depending on what brand offers it. Another factor that may affect consumer response is the fit between the brand and the remedial action. High fit between the brand and the behavior (e.g., the relatedness between a company and its corporate social responsibility efforts) predicts positive attitudes and increased purchase intentions among consumers (Becker-Olsen, Cudmore, and Hill 2006). Extending from this finding, we expect that different recovery efforts fit better with warm versus competent brands. In particular, we predict that warm (vs. competent) brands' offers of donations are viewed more favorably, whereas competent (vs. warm) brands' offers of discounts are viewed more favorably (H4).

Four experiments found support for our hypotheses. Study 1 manipulated warmth and competence perceptions (between-subjects) using scenarios about a neighborhood restaurant. Then, participants were presented with transgression information (i.e., "the restaurant was accused of tax evasion"). Following this, the dependent measures (i.e., likelihood of visiting the restaurant, recommending the restaurant to friends and family, and leaving a positive review for the restaurant) were presented on 7-point scales. Results revealed marginally greater support for the warm brand versus the competent brand, supporting H1 ($F(1, 211)=2.98$, $p=.086$). In Study 2, we identified moral decoupling as a mediator of the warmth-support link and explored transgression severity as a potential moderator. We presented scenarios about a local organic coffee shop that was either known for its contribution to the community (warm) or its rapid expansion within the community (competent). We varied the severity of the transgression by stating that the beans either came from farms that use child labor (severe) or farms that produce non-organic beans (mild). There were significant main effects for both brand perception ($F(1, 200)=6.98$, $p=.009$) and transgression severity ($F(1, 200)=22.77$, $p<.001$) in favor of the warm (vs. competent) brand and the mild (vs. severe) transgression, respectively. Further analyses revealed that participants rationalized and decoupled more for the warm (vs. competent) brand (supporting H2), but a mediation analysis revealed that only decoupling was a significant driver of support when both reasoning strategies were included in the model (supporting H3). Study 3 replicates these mediation findings and rules out consumer-brand identification and perceived relational norms as alternative explanations. Study 4 presented participants with a warm or a competent restaurant brand that engaged in tax evasion. Following this was a statement from the brand that either included an apology, an apology with an offer of a discount to future patrons, or an apology with an offer of a donation to the local food bank (the latter two offers were financially equivalent). Consumers were more supportive of the warm brand regardless of the type of apology (main effect $p=.002$), but for the competent brand, support was higher when it offered a discount than when it offered a donation ($p=.040$), and lower than the warm brand when it offered a donation ($p=.001$). Consumers may think that the donation offer was a

self-serving strategy on the competent brand's part in order to win consumers back.

In sum, this research contributes to the brand perception literature by demonstrating that after a transgression, warmth perceptions lead to higher consumer support and better acceptance of remedial actions. Moreover, we show that the warmth-support link is explained by a moral decoupling process (above and beyond moral rationalization). Practically, managers may consider investing in building a friendly and welcoming brand image since it will protect the brand in times of crises.

Putting the Harm Back into Product-Harm: Vulnerable Social Groups, Harm Perceptions, and Consumer Complaining Behavior

EXTENDED ABSTRACT

Thousands of people have been hospitalized for consuming laundry detergent pods since 2012, resulting in stricter regulation, costly changes to packaging, civil lawsuits, and even calls to ban the product (Ducharme 2018; Painter 2014; Zeliger 2018). It is noteworthy that calls for changes and holding the product manufacturers responsible came from cases of young children and those with dementia consuming the product, whereas cases of teenagers and young adults intentionally biting/consuming the detergent pods on social media elicited ridicule (Ducharme 2018). Although the product and the outcomes are essentially equivalent across these scenarios, what radically differs is how consumers respond to these incidents based on the vulnerability of the person involved, and in turn perceptions of harm.

Although the product-harm crisis, consumer complaints, and service failure literatures inherently deal with instances of harm (Davidow 2003; Dawar and Lei 2009; Gelbrich and Roschk 2011; van Heerde, Helsen, and Dekimpe 2007; Whelan and Dawar 2016), there is surprisingly little account of perceived harm and its downstream consequences in these literatures. We propose that cultural norms exist around seeing certain groups as vulnerable (women, children, elderly), either based on physical sensitivity to harm or based on a diminished ability to plan and anticipate outcomes (i.e., diminished agency). Protecting the vulnerable is a moral obligation, and exploiting or failing to protect vulnerable groups can be seen as an especially egregious violation of expectations and norms, and thus subject to moral judgment (Schein and Gray 2017). We draw from the morality literature (Schein and Gray 2017) to predict that when all else is equal (e.g., description of the product failure and its outcome), if the victim of a product harm is from a vulnerable group, consumers will 1) see increased harm done, and 2) complain more or increasingly endorse various complaining behaviors (e.g., complain to the company or regulatory agency).

Study 1 analyzed over 13,000 real-world consumer complaints made to the Consumer Product Safety Commission (CPSC) and finds that women (vs. men) are over-represented in the complaints data, specifically in instances that involve someone (e.g., a husband) making a complaint on their behalf. State-level variation in complaining on behalf of women is also predicted by state-level implicit gender stereotyping scores (which are conceptually and empirically related to seeing women as vulnerable and requiring protection). Study 2 analyzes over 800,000 cases of automobile safety complaints made to the National Highway and Traffic Safety Administration's Office of Defects. Despite men driving more and getting in more accidents (Insurance Institute for Highway Safety 2015), women are over-represented in these complaint data (as indicated by the number of

instances that the complaints make reference to "wife," "mother," and "daughter" as opposed to "husband," "father," and "son").

Studies 3-6 feature experimental designs to show that transgressions (e.g., product failures, service encounters) against consumers belonging to groups that are perceived to be vulnerable lead to increased perceptions of harm, and in turn more complaining behavior. In Study 3, participants imagined that either their mother or father was injured by an exploding lightbulb (based off of real CPSC complaints). When the victim was one's mother, participants saw more harm being done than when the victim was their father, even though the objective description of the outcome was the same. They also reported an increased likelihood of engaging in various complaining behaviors (e.g., complaining to the manufacturer, engaging in negative word of mouth, complaining to a consumer protection agency; Singh 1988). This effect was replicated in Study 4 in the context of a transgression involving psychological harm as opposed to physical harm (i.e., either a woman or a man was backing out of the driveway and his/her brakes failed, sending him/her backwards into the road).

Study 5 found similar effects with an elderly (vs. middle-aged) target, and in the context of financial harm resulting from perceptions of cognitive (as opposed to physical) vulnerability. Past work shows that people are motivated to perceive harm when they see an agent transgressing against a vulnerable target (Schein and Gray 2017), that people see it as a moral obligation to protect those who are vulnerable, and that moral judgments are more negative when the negative outcome is perceived to be avoidable (Alicke et al. 2008). Therefore, we predicted and found that when an elderly (vs. nonelderly) victim is transgressed against (i.e., convinced to buy insurance that she does not need), participants saw the company as failing to account for the victim's specific vulnerability, in turn leading to increased harm perceptions, leading to increased endorsement of various complaining behaviors.

Finally, Study 6 manipulated whether or not the company should have anticipated the victim's vulnerability. Participants read a scenario where an adult or a child accidentally consumed a sample of lemon shampoo believing it to be edible. The product was either a shampoo intended for adults, or for children. When the product was intended for children, participants 1) saw the company as more negligent in failing to account for the user's vulnerability, and 2) increasingly endorsed various complaining behaviors when the victim was a child as opposed to an adult. However, when the shampoo was intended for adults, no differences between the adult and child victim emerged. Thus, the same vulnerability (in this case, a lack of agency/ability to foresee consequences) that makes the company more responsible can also alleviate the company of responsibility when the product is not intended for the user.

These results highlight the importance of subjective harm perceptions and the antecedents of those perceptions (i.e., whether or not the victim is perceived to be a member of a vulnerable group). Such perceptions of harm have not been fully accounted for in past work. Perceptions of harm and subsequent complaining behavior/ endorsement of others' complaining behavior can be detrimental to a company through negative word of mouth, brand reputation, boycotts, and protesting (Ward and Ostrom 2006). Importantly, the group membership of the victim is easily identifiable by a company, thus allowing them to adjust their response strategy accordingly.

How Consumer Brand Sabotage Affects Observing Consumers: Buffering versus Amplifying Effects of Consumers' Prior Self-Brand Connections

EXTENDED ABSTRACT

Digitalization and consumer empowerment have given rise to the recent phenomenon of consumer brand sabotage (CBS), where some consumers engage in activities that deliberately try to harm a brand by impairing the brand-related associations of other consumers (Kähr et al. 2016)companies have been confronted with a new type of negative consumer behavior: consumers who have turned hostile and who are strongly determined to cause damage to the brand. Empowered by new technological possibilities, an individual consumer can now wreak havoc on a brand with relatively little effort. In reflection of this new phenomenon, the authors introduce the concept of consumer brand sabotage (CBS. Recently, the world has witnessed an increasing number of high-profile CBS activities against brands such as Gucci (e.g., attacking Gucci for a sweater many consumers perceived as racist and calling for boycott; Holcombe 2019), United Airlines (e.g., sharing a video about security personnel dragging a passenger from a United Airlines airplane; Aratani 2017), or Abercrombie & Fitch (e.g., creating and publishing a video to alter brand image by calling for distributing A&F clothing to the homeless; Karber 2013). These and similar CBS activities are often viewed by a large number of consumers and, therefore, have the potential to damage brand image, attitudes, and purchase intentions of observing consumers. For example, the "United Breaks Guitars" sabotage video on YouTube was viewed by more than 15 million people, causing an estimated damage of more than $180 million to United (The Economist 2009).

Despite the increasing frequency and severity of CBS activities, our understanding regarding the question as to how, when, and why CBS affects brand attitudes and behavioral intentions of observing consumers is very limited. What little research does exist has largely focused on the individual themselves as a brand saboteur (Kähr et al. 2016)companies have been confronted with a new type of negative consumer behavior: consumers who have turned hostile and who are strongly determined to cause damage to the brand. Empowered by new technological possibilities, an individual consumer can now wreak havoc on a brand with relatively little effort. In reflection of this new phenomenon, the authors introduce the concept of consumer brand sabotage (CBS and not on the potentially detrimental effects among *observers* of the brand saboteur's activity.

To address this gap, the current research conducted three studies. We first conducted a field survey to gain some preliminary insights and proof-of-concept regarding the damage of CBS. We managed to establish a collaboration with the market research institute GfK in Europe and contribute two unique items in a questionnaire for their annual 2017 Business Reflector survey on corporate reputation. Study 1 showed that CBS negatively affects attitudes toward the brand among third-party consumers not directly involved in the initial negative brand encounter. Thus, observing a CBS activity can significantly harm the focal brand. In addition, this study provided preliminary evidence for the fact that this effect depends on consumers' existing strength of connection with the brand (in this case, strong levels of consumers' brand identification buffered the negative effect).

Study 2 replicated the basic effect observed in Study 1 in a controlled setting on the online research platform Clickworker and further documented that the negative consequences of CBS differ by type of sabotage activity. Specifically, sabotage activities caused by a brand's violation of the saboteur's personal values (i.e., value-based

CBS) had a stronger negative effect on observing consumers' brand attitudes and purchase intentions as compared to sabotage activities that resulted from a brand's performance failures (i.e., performance-based CBS).

Study 3 (conducted on Amazon's Mechanical Turk again) replicated previous effects and found that the negative effect of CBS on observing consumers depends on the strength of their prior self-brand connections (i.e., the extent to which consumers feel a sense of oneness with a brand). More specifically, in the case of value-based CBS, we observed an amplifying effect of self-brand connection. Namely, the stronger an observing consumer's self was connected to the brand, the more intense the adverse impact of CBS was on this consumer (i.e., negative becomes even more negative). In contrast, in the case of performance-based CBS, we documented a buffering effect of self-brand connection. That is, the stronger an observing consumer's self was connected to the brand, the weaker the adverse impact of CBS was (i.e., negative becomes less negative).

In order to better understand these contrasting effects (i.e., buffering vs. amplifying effects) of consumers' self-brand connection, we analyzed the underlying mechanisms and identified two distinct mediators. The amplifying effect can be explained by a self-threat mechanism. Consumers who observed value-based CBS and who also were strongly connected to the brand felt that their self-concept was threatened through such a CBS activity. As a consequence, they lowered their brand evaluations (here, self-brand connection "adds fuel to the fire" such that "love becomes hate"). On the other hand, the buffering effect worked through a brand empathy mechanism. That is, highly self-brand connected consumers who were confronted with performance-based CBS were driven by their increased brand empathy to evaluate the underlying brand more benevolently (here, self-brand connection "contains the fire" to some degree because "love is blind").

Taken together, we contribute to knowledge regarding the under-researched marketing phenomenon of CBS (Kähr et al. 2016; Nyffenegger et al. 2018)companies have been confronted with a new type of negative consumer behavior: consumers who have turned hostile and who are strongly determined to cause damage to the brand. Empowered by new technological possibilities, an individual consumer can now wreak havoc on a brand with relatively little effort. In reflection of this new phenomenon, the authors introduce the concept of consumer brand sabotage (CBS and its consequences. Additionally, we contribute to extant research on brand transgressions and failures, which has largely focused on the transgressing brand-consumer dyad (Aaker et al. 2004; Hess et al. 2003; Tax et al. 1998). Examining how CBS affects other observing consumers uncovers a new and complementary network perspective. We further add to the extant transgression literature, which has largely focused on performance-based transgressions (Aaker et al. 2004; Einwiller et al. 2006; Puzakova et al. 2013) by comparatively examining the differential impact of value-based CBS. Finally, investigating the differential role of consumers' prior self-brand connections in the CBS context contributes to reconciling the ongoing discussion by the two schools of thought in the service failure literature on the "love is blind" (buffering) versus "love becomes hate" (amplifying) effect of the prior consumer-company relationship (DeWitt and Brady 2003; Grégoire et al. 2009; Tax and Brown 1998). Furthermore, we shed light on the psychological mechanisms (i.e., self-threat and brand empathy) that help explain when and why these competing effects (i.e., amplifying vs. buffering) prevail. These contributions are managerially relevant: a more detailed understanding of the damage of CBS is critical in enabling marketing and brand managers to effectively intervene to decrease a possible damage of CBS.

Should I Stay or Should I Go: When Our Companies Have Eyes for Other Consumers

EXTENDED ABSTRACT

Companies invest significant resources into acquiring new customers via promotions and exclusive discounts. Sometimes, they invite existing customers to spread the word (e.g., Hello Fresh recently asked customers to "Give your friends the gift of easy home cooking with a $40 discount!"). However, these recruitment efforts may have a negative impact on *existing* customers. In this research, we examine how existing customers react to "their" companies offering new customers special promotions.

According to equity theory (Adams 1963), individuals compare their own ratio of "inputs" (e.g., resources like time, money, effort) to "outputs" (e.g., rewards, perks, recognition) against the ratio of others. We propose that within consumption contexts, existing consumers—those who have invested in their commercial relationships—may perceive inequity when new customers receive benefits without previous resource investment. In fact, existing customers may experience feelings of betrayal, which may lead them to discontinue their relationship with the offending company and seek an alternative relationship. Not all consumers are created equal, however, as some segments may be more or less susceptible to feeling betrayed by new-customer promotions. For example, people who are naturally anxious in relationships (i.e., they fear abandonment, desire closeness) may feel greater threat when companies seek to attract new customers, whereas people who are naturally avoidant (i.e., they eschew commitment, prefer self-reliance) may feel less threat from the same behavior (Mikulincer and Shaver 2003; Sharpsteen and Kirkpatrick 1997). Drawing upon previous work highlighting the parallels between interpersonal relationships and brand relationships (Aggarwal 2004; Fournier 1998), we investigate the impact of dispositional attachment styles on switching behavior in the face of differential incentives. We test these propositions in a series of four experiments.

Experiment 1 examined existing customers' reactions to differential incentives. Online participants (*N*=146) were asked to imagine that they had signed up for a new loan program from their current bank. They then saw that new customers were signing up for the same loan and receiving either a lower interest rate than themselves (other-benefit), a higher rate (self-benefit), or the same rate (control). We measured participants' likelihood of switching companies as our key dependent variable, followed by perceived betrayal (Grégoire and Fisher 2008) as a potential mediator. As predicted, participants (existing customers) were more likely to switch when new customers received a lower interest rate (*M*=4.74) compared to when others received a higher interest rate (*M*=3.11) or the same interest rate (*M*=2.78; *p*s<.001). Mediation results revealed a significant indirect effect via perceived betrayal (Hayes 2013). Namely, participants expressed greater feelings of betrayal when new customers received a lower interest rate versus the same interest rate, which in turn led to greater switching (indirect B=1.45; 95% CI: 1.04, 1.92).

Experiment 2 introduced a new service and examined whether giving existing customers "power" to share company benefits impacts reactions to new customer promotions (vs. Experiment 1 where the bank automatically rewarded benefits). Students (*N*=325) read a scenario about a food delivery service where they were a loyal customer. The company was offering a promotion that either benefited new customers or themselves (i.e., "Invite your friends to Speed Eats—we'll give them (you) free delivery on every order for a month"). In addition to switching intentions, we also measured interest in a competing brand (e.g. "I would stop using Speed Eats and

start using Meal Grab"). When the promotion gave benefits to new customers versus themselves, participants were more likely to switch (M=2.48 vs. M=1.60; p<.001) and seek out an alternative relationship (M=4.24 vs. M=3.76; p<.001). Thus, inviting existing customers to control company outputs did not prevent them from looking elsewhere.

Experiments 3 and 4 examined boundary conditions. In Experiment 3, we manipulated equity directly in a 2(Other's Input: High vs. Control) × 2(Other Benefit: Yes vs. No). Online participants (N=205) read a scenario about "their" airline inviting new customers to the company. High-input customers were those enjoying platinum membership with *another* airline ("we recognize how much time and effort you've invested"; this information was omitted in the control condition); the benefit was being automatically rewarded with platinum membership for joining (or no mention of benefits). A main effect of Other Benefit on switching intentions (p<.001) was qualified by a significant interaction (p=.022). As predicted, with high-input new customers, participants' switching was unaffected by them receiving complimentary status or not (p=.19). However, when new customers had *not* explicitly invested in their current airline, participants were significantly more likely to switch when they would receive status (p<.001).

Experiment 4 introduced dispositional attachment style as a moderator. Students (N=353) were randomly assigned to one condition in a 2(Self Benefit: Yes vs. No) × 2(Other Benefit: Yes vs. No) between-subjects design. After completing anxiety and avoidance scales (Brennan, Clark, and Shaver 1998), participants read a scenario about a café where they were a loyal customer. One day, they visited with an acquaintance who only recently joined the loyalty program. We manipulated who received a free coffee as a part of a customer appreciation event: the acquaintance, the participant, both, or neither of them. The results revealed a marginally significant interaction on switching intentions (p=.092). When participants did *not* receive a free coffee, they were more likely to switch when new customers received a free coffee (M=2.87 vs. M=2.37, p=.014). However, when participants themselves received a free coffee, switching did not differ as a function of others' benefits (M_{free}=2.40, M_{pay}=2.39, ps>.93). Importantly, these results were moderated by attachment style. While avoidance predicted greater switching (regardless of benefit recipient), anxiety predicted greater switching only when the acquaintance received the benefit, but the participant did not (ps<.05).

The current research highlights the importance of retaining existing customers for company success. Four experiments suggest that companies may risk losing existing customers if they offer new-customer promotions. Existing customers may see themselves as having invested in the relationship, potentially expecting outputs commensurate with inputs. Offering incentives to new consumers may spell "betrayal" to loyal customers, especially when new customers have not "earned" their benefits.

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Waste Not! Antecedents and Consequences of Disposal Decisions

Chairs: Jeehye Christine Kim, Hong Kong University of Science and Technology, China
Young Eun Huh, Korea Advanced Institute of Science and Technology, South Korea

Paper #1: Expiration Date Perception and Food Disposal Decision

> Jeehye Christine Kim, Hong Kong University of Science and Technology, China
> Young Eun Huh, Korea Advanced Institute of Science and Technology, South Korea

Paper #2: Stating the Obvious: How "Ugly" Labels Can Increase Purchase of Unappealing Produce and Reduce Waste

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> Yann Cornil, Sauder School of Business, University of British Columbia, Canada
> Joandrea (Joey) Hoegg, Sauder School of Business, University of British Columbia, Canada

Paper #3: Symbolic Disposal

> Aaron R. Brough, Utah State University, USA
> Mathew S. Isaac, Seattle University, USA

Paper #4: Rediscovering Consumer Wastefulness

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> Robert Fisher, University of Alberta, Canada
> Jennifer Argo, University of Alberta, Canada

SESSION OVERVIEW

Most consumers are averse to waste as they like to maximize the use of their purchases (Arkes 1996; Bolton and Alba 2012). Nonetheless, waste of goods is still rampant. Almost one-third of the edible food is wasted worldwide (FAO 2015). In the United States, the food waste rate is even higher at 40%, which amounts to the economic loss of $218 billion (Hoover 2017). Given its rising economic and environmental costs, understanding what leads to waste and exploring ways to reduce it is important. This session investigates antecedents and consequences of waste and proposes novel interventions to reduce waste.

Kim and Huh will begin the session by exploring a factor contributing to food waste coming from the consumer side, that is, expiration date perception. They demonstrate that a mere framing of a food item as healthy makes consumers to perceive it as expiring more quickly than when the same food is not framed as healthy. This perception then leads consumers to be more likely to waste a food item when it is framed as healthy due to a heightened concern for expiration.

Shifting the focus to the producer side, Mookerjee, Cornil and Hoegg investigate a way to reduce waste created from discarding goods not meeting beauty standards. They propose that explicitly labeling unappealing produce as "ugly" increases purchase intention from consumers because the "ugly" labeling debiases beauty premium and increases the credibility of the seller. Their findings suggest that the use of "ugly" labeling can help producers avoid discarding unappealing, however, edible produces.

Extending the discussion out of the food domain, Brough and Isaac examine consumers' decision to dispose goods for symbolic reasons and further explores its consequence on consumers' goal perception. They find that symbolic disposal decisions increase perceived goal progress because consumers perceive greater goal commitment from symbolic disposal decisions.

Finally, Rawal, Fisher and Argo end the session by proposing a new conceptualization in understanding consumer wastefulness. They advance past research by arguing how indefinitely storing usable possessions, a seemingly prudent consumer behavior, is actually wasteful. Overall, they propose to adopt a utility and marketplace centric-view instead of a monetary and individual centric-view in defining consumer wastefulness.

Together, four papers aim to expand wisdom by using well-established theories to address a new problem of waste. The first two papers focus on tackling food waste by examining antecedents of food waste whereas the last two papers examine consequences and conceptualization of general disposal behaviors. This session raises questions of what leads to waste, both at a consumer and a producer level, and how we should tackle this issue at both the practical (i.e., intervention to reduce waste) and theoretical (i.e., how to conceptualize wastefulness) level. We believe our session will attract audiences from diverse background including researchers in motivation, self-control and food, as well as those interested in public policy and ethical issues in marketing.

Expiration Date Perception and Food Disposal Decision

EXTENDED ABSTRACT

Expiration date information shapes consumers' decisions to purchase, consume, or dispose of food (Cardello and Schultz 2003; Tsiros and Heilman 2005). Despite the important role that expiration dates play in shaping consumers' food decisions, expiration date is often absent or ambiguous and consumers need to infer it based on available cues. Apart from the apparent rotting of food, or the presence of a clearly specified expiration date, what cues can consumers rely on to judge whether food will last for a long or a short time? The current research proposes that the perceived healthiness of a food item is an important cue that consumers use to infer its expiration date.

Previous research has shown that people use what they know about the most typical member of a category to make inferences about other category members (Chin-Parker and Ross 2004). Building on this line of research, we posit that when a food's expiration date information is absent or ambiguous, consumers will infer an expiration date based on what they know about the most typical member of the food's category. Since fresh produce is normally considered to be the most typical member of the category of healthy food (Carels, Harper, and Konrad 2006), we propose that when the expiration date information is not available for a food belonging to the healthy food category, people infer its expiration date based on what they know about fresh produce. Because fresh produce does indeed perish quickly, we suggest that people generalize this characteristic to other healthy foods, resulting in an intuition that healthy food expires quickly.

We also demonstrate that this intuition has a significant impact on food disposal decision. Because the concern about food expiration is important for decisions to discard food (Godfray et al. 2010; Kantor et al. 1997), we posit that the intuition that healthy food expires quickly will influence consumer decisions in this context. Specifically, we propose that when consumers decide whether to eat or discard food that has been kept for a certain period of time, they will be

more likely to discard it if they perceive it as healthy food because they perceive healthy food to expire more quickly.

In Study 1, participants (N = 191) were randomly assigned to a framing condition (healthy vs. non-healthy) and viewed the same sandwich which only varied in the health score it received which was high (healthy) or low (non-healthy). All participants were asked to imagine that they had ordered the sandwich to take out and indicate the number of days they thought the sandwich would last before it went bad. As predicted, participants in the healthy condition expected the sandwich to last for a shorter period of time (*M* = 1.93 days, *SD* = 1.20) than did participants in the non-healthy condition (*M* = 2.39 days, *SD* = 1.65; *p* = .03).

Study 2 provides support for the proposed mechanism. If, as we argue, the intuition that healthy food expires quickly is driven by inferences drawn from knowledge about typical category members, then individuals who consider a highly perishable food to be the most typical of healthy food should hold this intuition strongly. However, individuals who consider a less highly perishable food to be the most typical of healthy food should hold this intuition less strongly. Participants (N = 505) were randomly assigned to view a breakfast bar framed as healthy or non-healthy and indicated how quickly they thought the breakfast bar would go bad. Participants were then asked to list the first food item that came to their mind when they thought of "healthy food" and indicate how easily perishable the food item they listed was. As predicted, the breakfast bar framed as healthy (*M* = 4.56, *SD* = 1.43) was perceived to expire more quickly than the bar framed as non-healthy (*M* = 3.85, *SD* = 1.66; *p* < .001). More importantly, the perceived perishability of the most typical healthy food listed moderated food expiration perception (*p* = .005). Among those who perceived the most typical healthy food to be highly perishable (at +1SD), the healthy framed bar was perceived to expire more quickly than the non-healthy framed bar (*p* < .001). By contrast, healthy framing did not influence the perceptions of how quickly the bar would expire among those who perceive the most typical healthy food to be not highly perishable (at -1SD; *p* > .1).

Study 3 examines the consequence of the intuition that healthy food expires quickly on disposal decision. Participants (N = 458) were asked to imagine that they had ordered a daily special for lunch, which was labeled either as a "daily salad special" (healthy condition) or a "daily pasta special" (control condition; Irmak, Vallen, and Robinson 2011) but same on all other aspects including the food picture and description of ingredients. Participants read that they had packed half the portion for to-go and put it in a refrigerator to eat later. They were told that they decided to clean out their refrigerator three days later and found the leftover lunch that they had put in the refrigerator. They were then asked to indicate how likely they were to discard the leftover instead of eating it for lunch and how quickly they thought their lunch would expire compared to other daily specials. As predicted, participants in the healthy condition were more likely to discard the leftover lunch (*M* = 4.62, *SD* = 2.22) than were those in the control condition (*M* = 4.11, *SD* = 2.19; *p* = .014). Further, the results of mediation analysis revealed that the healthy framing increases the likelihood of discarding the food through expiration date perception.

In summary, the results of three studies demonstrate that consumers have an intuition that healthy food expires more quickly than non-healthy food, and that this intuition influences the decisions to discard food. Because of the intuition, consumers are more likely to discard food when it is portrayed as healthy than non-health.

Stating the Obvious: How "Ugly" Labels Can Increase Purchase of Unappealing Produce and Reduce Waste

EXTENDED ABSTRACT

Consumers demand fruits and vegetables that are aesthetically pleasing, and producers and retailers meet this demand by throwing away large amounts of food that fail to meet aesthetic standards. Consequently, 20% to 40% of fresh produce is wasted, adding to the growing environmental problem of food waste (Hyslop 2015). Burgeoning research has started to investigate how marketers can prevent such waste (Grewal et al. 2019).

Recently, some retailers have proposed innovative marketing campaigns to address produce waste; for instance, French retailer Intermarché's advertising campaign on "ugly fruits" (in French, "fruits moches") attracted a lot of media attention. However, this campaign was primarily focused on brand building, while purchase of unappealing produce was incentivized by steep price discounts. It remains to be tested whether and why merely labeling unappealing produce "ugly" at the point of sale can increase purchase.

We contend that consumers reject unappealing produce because of the "beauty premium" effect: people display negative biases toward aesthetically unattractive individuals or products, which suffer from a wide range of negative attributions (Dion, Berscheid, and Walster 1972; Hoegg, Alba, and Dahl 2010). Applied to our context, we propose that unappealing produce are judged less tasty and less healthy, the two key attributes that motivate food consumption (Chandon and Wansink 2012). We further propose that a label that makes the aesthetic flaw explicit can help consumers overcome their biased evaluations, in line with research showing that scrutinizing the source of a biased evaluation weakens the bias (Schwarz and Clore 1983). Specifically, we suggest that explicitly labeling unappealing produce as "ugly" should increase taste and healthiness expectations, which should translate into higher purchase. This effect should occur only if the label emphasizes an obvious aesthetic flaw, rather than a less specific flaw that may have quality implications (e.g., "second-rate", sometimes used by retailers).

While we contend that the beauty premium effect is the main obstacle to the sales of unappealing produce, and that ugly labeling increases purchase intentions through its debiasing effect, we acknowledge that other mechanisms may be at play. In particular, by emphasizing a visible flaw, ugly labeling may increase the credibility of the seller, which should increase purchase intentions (Chaiken 1980).

Study 1 was a field study at a public Farmer's Market. We ran a stall during three consecutive Saturdays, where we sold unappealing cucumbers and carrots provided by a local supplier. We manipulated a label next to the baskets of produce: the produce was either called "ugly" (e.g., "ugly carrots"), or not (e.g., "carrots"). We changed the label every hour. We recorded the number of shoppers who walked within two meters of the stall (N=543), and their behavior. Logistic regressions controlling for time and day showed that the "ugly label" increased the likelihood that shoppers would stop and look at the stand (43.01% vs. 34.81%; *p*=.06), the likelihood that they would engage with the seller (28.49% vs. 20.99%; *p*=.02), and their purchase likelihood (23.66% vs. 18.76%; *p*=.08). Overall, "ugly labeling" generated $141.36 revenue, versus $99.55 in the control condition.

In Study 2, 302 MTurk participants were shown the photo of a basket of cucumbers sold at a market; we manipulated between-subject ugly labeling ("ugly cucumbers" vs. "cucumbers") and actual appearance (unappealing vs. normal-looking). In line with our hypotheses, we found significant interaction effects of label and appearance on purchase intentions, as well as on health and taste ex-

pectations (*p*'s<.01). In the absence of ugly label, participants judged unappealing (vs. normal-looking) cucumbers less tasty, less healthy, and less worthy of purchase (*p*'s<.01), while in the presence of ugly label, unappealing cucumbers were judged just as tasty, healthy, and worthy of purchase as normal-looking produce (*p*'s>.20). A moderated mediation model confirmed that the ugly label increased purchase intentions of unappealing cucumbers through de-biasing health and taste evaluations. Importantly, we measured the seller's credibility, and found that it also mediated the effect of ugly labeling on purchase.

In Study 3, we tested the hypothesis that only labels that emphasize aesthetic flaws improve purchase. Five hundred MTurk participants were shown unappealing cucumbers, associated with either one of four labels. Two labels specifically pointed out that the only flaw in the produce was aesethetic (i.e., "ugly", "misshapen"), two highlighted a flaw but did not specify what it was (i.e., "inferior", "second-rate"). We also had a control condition with no label. We found that both "ugly" and "misshapen" increased purchase intentions, compared with the other three conditions (*p*'s<.01). A mediation model confirmed the results of Study 2: the two labels focusing on aesthetics (ugly and misshapen) increased purchase intentions via their effect on taste and health perceptions, but also via their effect on seller's credibility.

In Study 4, we further investigated the "credibility" mechanism by comparing the effectiveness of ugly labeling with a statement from what should be perceived as a credible source: an independent government body. Specifically, we used a "love food, hate waste" awareness campaign endorsed by the government. A total of 399 MTurk participants were shown a supermarket ad displaying an unappealing apple. We manipulated ugly labeling ("ugly apple" vs. "apple"), as well as the presence (vs. absence) of the "love food, hate waste" government endorsement. We found significant interactions of ugly labeling and government endorsement on purchase intentions (*p*=.02) and on seller's credibility (*p*=.03). Both interventions equally increased purchase and credibility (*p*'s<.01), but they did not have any cumulative effect. Confirming the results of the previous studies, credibility, as well as taste and health mediated the effect of ugly labeling on purchase intentions.

Our research has important managerial implications: a simple labeling technique (ugly labeling) improves purchase of unappealing produce, and is just as effective as an awareness campaign that requires more elaboration by consumers (and more effort for retailers). Theoretically, we find converging evidence of two mechanisms: ugly labeling improves a seller's credibility, and helps overcome negative aesthetic effects by correcting biased perceptions of critical product attributes.

Symbolic Disposal

EXTENDED ABSTRACT

Marketers have long understood that consumption often occurs not only for functional, but also symbolic, purposes. Indeed, consumers engage in compensatory consumption (Rucker and Galinsky 2008) and express their identity through their purchases and possessions (Chernev, Hamilton, and Gal 2011). In contrast to the abundance of literature on symbolic consumption, very little research has examined the corollary practice of symbolic disposal. Yet we argue that like consumption decisions, many disposal decisions are symbolic.

Symbolic disposal may be defined as making disposal decisions for symbolic rather than purely functional reasons. After weight loss, for example, consumers may dispose of larger-sized clothing items not only for practical reasons (i.e., because they no longer fit) but as a symbolic ritual affirming identity change (Rubin, Shmilovitz, and Weiss 1993). Following the dissolution of a relationship, people may dispose of photos (Sas and Whittaker 2013) and other items that serve as reminders of the past relationship in order to help them move on. Sometimes consumers symbolically divest themselves of possessions in order to avoid being affiliated with an outgroup that has adopted similar products (Berger and Heath 2007).

Our specific research question in this project is whether disposal, when symbolically related to a goal (but not diagnostic of actual progress), affects perceived goal progress. We predict a symbolic disposal effect, in which disposing of an object that symbolically represents a barrier to goal pursuit can inflate one's perception of goal progress, even when the act of disposal has no impact on actual goal progress. We attribute this effect to the notion that symbolic disposal serves as an active and emphatic signal of goal commitment.

Across three studies, we demonstrate the effect of symbolic disposal on perceived goal progress and show that this effect is mediated by increased goal commitment.

In Study 1, we compare the efficacy of acquisition versus disposal in signaling goal commitment. 79 MTurkers were asked to imagine (in a random order) having eight different goals (e.g., improve diet, improve financial stability). For each goal, participants chose which of two actions—acquisition-related vs. disposal-related—would show greater commitment. For example, the actions for the "improve diet" goal were "purchasing low-calorie snacks for your home and office" and "discarding high-calorie snacks from your home and office." For "improve financial stability," the actions were "opening a certificate of deposit (CD) in order to save more" or "cutting up a credit card in order to spend less." In three of the eight scenarios, more participants selected the disposal option than the acquisition option (89%; 57%, and 52%). 42% of respondents chose the disposal option for at least half of the eight scenarios. After viewing all eight scenarios, participants were asked to determine which action, in general, shows greater commitment to a goal—acquisition or disposal. Participants chose disposal equally as often as acquisition (49% vs. 51%). Together, these results suggest that disposal can express goal commitment at least as well as acquisition in a variety of situations.

In Study 2, we show that symbolic disposal must occur in the same domain as the goal in order for disposal to affect perceptions of goal progress. When goal domain mismatches the symbolic disposal domain, the effect of disposal on goal progress perceptions is eliminated. We randomly assigned 297 MTurkers to a 2 (symbolic disposal: financial vs. fitness) x 2 (goal: financial vs. fitness) design. Participants read a vignette in which Lisa set either a financial or fitness goal, then discarded a t-shirt for reasons related to fitness (oversized) or finances (low-quality). Goal progress was then measured: "How much progress do you think Lisa feels she has made towards achieving her [financial / fitness] goals?" (7 = Extremely strong; 1 = Extremely weak). A significant interaction effect was observed; $F(1,293) = 6.60$; p = .011. Specifically, when Lisa had a fitness goal, perceived goal progress was higher in the fitness disposal condition than in the financial disposal condition (M = 4.91 vs. M = 4.25); $F(1,293) = 7.17$; p < .008. Similarly, when Lisa had a financial goal, perceived goal progress was directionally higher in the financial disposal condition than in the fitness disposal condition, although this contrast was not significant (M = 4.52 vs. M = 4.28); p = .336. Together, the results of study 2 showed that participants perceived greater goal progress when the domains of the goal and the disposal decision matched rather than mismatched.

Finally, in Study 3, we show that when product disposal is accidental rather than volitional, the effect of disposal on goal progress perceptions is attenuated. We further show that goal commitment mediates the effect of symbolic disposal on perceived goal progress. We randomly assigned 402 MTurkers to a 2 (disposal volition: voluntary vs. accidental) x 2 (disposal relevance: goal-related vs. goal-unrelated) design. Participants read a vignette in which John had set a goal to consume less alcohol. John subsequently ordered a glass of [water / wine], which he didn't drink [no reason offered / because it spills]. Goal progress and goal commitment were measured, and results indicated that for goal-related disposal (wine), perceived goal progress was higher when disposal was voluntary rather than accidental (M = 6.49 vs. M = 4.42). However, this difference was attenuated for goal-unrelated disposal (water).

By differentiating between disposal that occurs for functional versus symbolic reasons, this paper contributes to the literature on disposal by enhancing our understanding of consumers' motivations for disposing of possessions. Unlike functional disposal, symbolic disposal can occur following changes in a consumer's self-identity or severed personal or brand relationships, independent of any change in functional needs, product performance, storage space constraints, etc. We also contribute to the literature on goals and motivations by showing that both goal commitment and perceived goal progress can be influenced by symbolic disposal.

Moreover, this research contributes to the literature on waste. To reduce wastefulness, it is important to understand the antecedents of wasteful behavior. This paper suggests that one of those antecedents is a motivation to signal a symbolic message by engaging in wasteful behavior.

Rediscovering Consumer Wastefulness

EXTENDED ABSTRACT

Storing possessions is becoming an increasingly common behavior. For instance, the average American household stores about 50 items (worth $3100), which are not being used (Business Wire 2007). Moreover, the pervasiveness of storing possessions in the US created the $38 billion self-storage industry (Harris 2018). Similarly, consumers in the UK were found to own nearly 1.7 billion pounds of unused clothing (worth £30 billion), which has not been used for at least a year (Smithers 2012).

Although storing possessions may be perceived as prudent consumer behavior, it can have a negative impact on the environment and society. Specifically, we argue that when people indefinitely store goods, which can be used by others in need of those goods, they act wastefully by depriving the marketplace of the good's utility and forcing potential users to acquire new goods, which in turn necessitates the extraction of additional resources from the environment. Stated differently, the marketplace ends up consuming resources to manufacture more goods, for both the owner (i.e., the individual storing a product) as well as the potential user, than it actually needs. In the present research we review past conceptualizations of wastefulness, identify and discuss important themes and propose a new perspective in defining consumer wastefulness.

Although extant literature has extensively studied the social, ecological and economic impact of wasteful behaviors, little work has been done to understand what comprises wastefulness. Arkes and his colleagues (1996; Arkes and Hutzel 1997) provided the most comprehensive conceptualization of consumer wastefulness in the form of two maxims. The first form of wastefulness occurs when people spend more than is necessary or appropriate. This form of wasteful behavior is assessed at the time of spending money in ac-

quiring a product or inferred based on how others spend their money. Buying goods at regular instead of discounted prices and purchasing a luxury car instead of a regular car are among many examples of this form of wastefulness. Apart from estimating wastefulness of their own choices, consumers also observe how organizations spend their money to form perceptions of the organization's wastefulness. For instance, companies or non-profits that are found to spend extravagantly on advertising and promotions are also perceived to be more wasteful (Kirmani 1990; Townsend 2017).

The second form of wastefulness occurs when consumers do not utilize the complete value of a purchased item (e.g., partially consuming purchased food and dumping the rest). When consumers spend money to acquire products, they tend to account for the value of the product against the money they spend in acquiring it (Thaler 1985; Okada 2001). So throwing away a valuable product is considered equal to throwing away (i.e. wasting) money. Literature on the sunk cost bias, which finds that people continue with a failing endeavor to justify past investments, has also been found to be a result of the desire of being perceived less wasteful (Arkes and Blumer 1985; Garland 1990; Garland and Newport 1991).

Although these definitions identify instances of wasteful behaviors, the conceptualization is limited in several important ways. First and foremost, these definitions consider goods as either being used or discarded without the potential for them to be stored, which, as we argue, is becoming an increasingly widespread behavior. Narrowing consumer behavior to either acquiring or discarding products, prompts wastefulness to be treated as a *utilization* problem, such that consumers can be less wasteful by either decreasing over-utilization or increasing under-utilization or non-utilization of products. We advance this notion by suggesting that wastefulness be treated as an *allocation* problem in which resources need to be distributed to potential users for the system to be less wasteful instead of being stored indefinitely with non-users.

Second, previous conceptualizations of wastefulness has primarily emphasized *monetary waste* as a means of evaluating wastefulness. Arkes (1996; study 1) found that people identify "waste or loss of money" as the most common form of consumer wastefulness. Moreover, evaluation of others' wastefulness has also been based on inappropriate use of money (Kirmani 1990; Townsend 2017). The broad emphasis on monetary wastefulness originates in the traditional tenet of cost-benefit reasoning, which suggests that the cost (i.e. money) expended in acquiring goods needs to be recovered to be less wasteful (Csikszentmihalyi 2000). However, we propose evaluating wasteful behaviors with an emphasis on stored *utility* that is wasted by not being available to users in the marketplace. Utility is derived from natural resources, which form a part of the limited public good, and therefore needs to be conserved.

Finally, past research assesses consumer wastefulness at the level of *individual* consumers. Although this puts the onus on individual consumers to be less wasteful (Wall 2000), it also motivates consumers to estimate wastefulness for themselves, without considering the impact of their behaviors on the ecosystem. We propose to assess wastefulness at the level of the *marketplace*. The individual-centric view suggests that cost of the product needs to be recovered from its utility in order to not be wasteful, whereas a marketplace-centric view suggests that resources, which have been consumed in manufacturing finished products, need to be allocated to potential users in order to not be wasteful. Thus, storing possessions may be perceived as non-wasteful (or even prudent) to the owner, but it is wasteful for the marketplace because it compels potential users to acquire new goods and consume additional resources while existing goods remain unconsumed. So instead of indefinitely storing posses-

sions, owners can be less wasteful by selling their possessions in the secondary market, donating it to charities or giving it away to friends and family who are likely to use those products.

In sum, we advance the extant literature on wastefulness by identifying the common practice of indefinitely storing possessions as an important source of consumer wastefulness in the marketplace. Thus, consumers need to be made aware of this wastefulness and, as stewards of their possessions, they should dispose of leftover utility in these possessions to potential users in the secondary markets.

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"Mental Accounting Matters":
Mental Accounting Shapes How People Invest, Spend, Purchase, and Consume

Chair: Jinwoo Kim, Carnegie Mellon University, USA

Paper #1: Moderators of Loss-Chasing: How Skewness, Information, and Framing Shape the Dynamics of Risk-Taking

Jinwoo Kim, Carnegie Mellon University, USA
Alex Imas, Carnegie Mellon University, USA
Christopher Olivola, Carnegie Mellon University, USA

Paper #2: The Effects of Earmarking on Psychological Spending and Pain of Payment

Justin N. Pomerance, University of Colorado Boulder, USA
Nicholas Reinholtz, University of Colorado Boulder, USA
Stephen Spiller, University of California, Los Angeles, USA
Elizabeth Webb, Columbia University, USA

Paper #3: Avoiding a Discount to Pay the Full Price: Contingent Promotions Backfire When Redemption is Unlikely

Andong Cheng, University of Delaware, USA
Ashley Stadler-Blank, Xavier University, USA

Paper #4: Moderators and Extensions of the Interpersonal Sunk-Cost Effect

Christopher Olivola, Carnegie Mellon University, USA
Jinwoo Kim, Carnegie Mellon University, USA
Einav Hart, University of Pennsylvania, USA

SESSION OVERVIEW

Mental accounting (Thaler 1985) explains investment decisions (Benartzi and Thaler 1995; Odean 1998), choices of payment (Prelec and Loewenstein 1998), commodity purchases (Hasting and Shapiro 2013), and product replacement decisions (Okada 2001), far better than conventional theories. This session explores unchartered, but important, applications and implications of consumer mental accounting theory across several domains: dynamic risk-taking, earmarking, contingent promotions, and interpersonal sunk-costs. The papers in this session offer novel insights into how mental accounting operates in these various domains, and how it shapes consumer decisions.

The first paper (Kim, Imas, and Olivola) develops and tests a model based on mental accounting and cumulative prospect theory, to explain risk-taking over time. Consistent with the model, people take on progressively more risk after prior losses when they are faced with positively-skewed risks (i.e., low probabilities of large gains and high probabilities of small losses) and when they know the total number of investment opportunities. Also consistent with the model, framing risky investments as the default and losses as non-gains increases overall risk-taking.

The second paper (Pomerance, Reinholtz, Spiller, and Webb) examines the influence of earmarking on spending decisions. It shows that earmarking reduces spending in non-earmarked domains, and makes consumers more inelastic to a price surge in the earmarked consumption. These effects occur because earmarking separates *psychological spending* and *economic spending*. As a result, consumers behave as if they have already made the payment once their money is earmarked.

The third paper (Cheng and Gonzales) demonstrates that contingent promotions lower reference prices and can, as a result, decrease transaction utility when those promotions are unattainable. For example, given a choice between a store with a weekday-discount and another store without that discount, weekend-customers prefer the latter, because visiting the former feels more painful due to the salient unattainable promotion opportunity. Similarly, when a channel offers a contingent, yet unredeemable promotion, some consumers opt for a competing channel that sells the same product at a higher price. The transaction disutility created by salient, yet unattainable, contingent promotions drives these normatively irrational decisions.

Finally, the fourth paper (Olivola, Kim, and Hart) shifts the scope toward consumer decision-making involving other people, by examining moderators and extensions of the interpersonal sunk-cost effect: when consumers pursue an inferior option because *others* have invested non-recoverable resources to obtain it. This paper shows that consumers are less likely to honor interpersonal sunk-costs once the investor is no longer present. By contrast, the amount of social reciprocity (i.e., number of investors) does not moderate the interpersonal sunk-cost effect. Moreover, this paper reveals that investors themselves also exhibit a type of interpersonal sunk-cost effect.

Together, the four papers in this session document, and explain, novel consumer decision-making "anomalies" that fit within the theory of mental accounting. These papers also extend mental accounting, by highlighting novel aspects and implications of this theory. In sum, this session showcases how we can use mental accounting to identify and correct suboptimal consumption and purchasing decisions, and hence help consumers 'become wiser.'

Moderators of Loss-Chasing: How Skewness, Information, and Framing Shape the Dynamics of Risk-Taking

EXTENDED ABSTRACT

Prior losses significantly affect risk-taking. People are generally risk-averse, but take on progressively more risk in an attempt to recoup prior losses (i.e., loss-chasing)–a tendency that can significantly impact financial well-being. For example, a once successful derivatives trader at Barings Bank–one of the oldest financial institutions–began to take on dangerous amounts of risk in response to prior investment losses, and ended up bankrupting the entire firm when his bets resulted in catastrophic losses. Here, we examine several factors that affect how much risk people take and how they respond to prior losses. We derive predictions from a theoretical model based on mental accounting and cumulative prospect theory. Consistent with the model, we find that loss-chasing only occurs when risk is positively skewed and the total number of periods is known. Framing losses as non-gains and risky options as defaults also increases risk taking overall.

In our proposed model, people increase risk-taking in response to prior losses when an open (vs. closed) mental account is in the red because they have a strong preference to recoup losses and close the account 'in the black' (Thaler and Johnson 1990). Consistent with this model, Imas (2016) demonstrated that people took on more risk after paper losses (Langer and Weber 2008) and less risk after realized losses (Shiv et al. 2005), as realization closes the 'bracket' of prior outcomes. In the current paper, we test a more complete set of predictions from the model. Since loss-chasing is driven by the motivation to wipe out prior losses, it should only be observed when the risky prospect offers an opportunity to (at least) break even. People

should also be most prone to loss-chasing when they know that the current period is their last opportunity to recover.

We then derive further predictions on how framing should affect the *overall levels* of risk-taking. First, although not-winning a lottery is normatively equivalent to losing a lottery, people should take more risk in the not-winning (i.e., no-gain) frame because the lottery is seen as a positive gamble, not a mixed gamble, which mitigates the effects of loss aversion. Second, framing the risky option (rather than the sure payoff) as the default should alter the reference point, and increase risk-taking overall.

To test these predictions, we conducted four preregistered experiments using the same general paradigm, on Amazon Mechanical Turk. In the basic setup, participants made four investment decisions. In each period, participants could invest up to $0.25 in the lottery, and immediately learned the outcome of their decision. Two lotteries were used in the experiment: Lottery P and Lottery N. Lottery P (Lottery N) offers a *1/6* (*5/6*) probability to return *6* (*1.2*) times the amount invested, and a *5/6* (*1/6*) probability to lose the amount invested. Thus, for any amount invested, both lotteries yield identical expected returns, yet differ with respect to their *skew*: Lottery P offers a larger gain with a low probability and a high probability of a loss (i.e., *positive-skew*), while Lottery N offers a smaller gain with a high probability and a low probability of a loss (i.e., *negative-skew*).

Each experiment tested a different set of predictions. In Study 1, participants were assigned to either the positive-skew (i.e., Lottery P) or negative-skew condition (i.e., Lottery N). In Study 2, all participants invested in Lottery P. However, only those in the known-end condition knew there would be four investment rounds; participants in the unknown-end condition were not informed about the number of investment rounds and hence did not know which round would be the last opportunity to recover prior losses. Study 3 replicated Study 1, but had one additional positive-skew condition in which losses were framed as the absence of a gain. In the no-gain condition, losing the lottery was described as "earn nothing" instead of "lose the money you invested," but the two descriptions were normatively identical. Finally, in Study 4, the investment decisions were presented in either the (standard) <u>i</u>nvestment frame or a <u>d</u>ivestment frame. Participants in the investment frame condition decided how much money to *invest* in Lottery P. By contrast, those in the divestment frame condition decided how much money to *keep* in Lottery P.

Consistent with our model's prediction, participants took on more risk in the final round in the positive-skew condition than the negative-skew condition (Study 1: $M_{\text{positive-skew}}$ = +1.1¢ vs. $M_{\text{negative-skew}}$ = –0.09¢, p = .039; Study 3: $M_{\text{positive-skew}}$ = +1.3¢ vs. $M_{\text{negative-skew}}$ = +0.3¢, p = .155; Studies 1 and 3 combined: $M_{\text{positive-skew}}$ = +1.2¢ vs. $M_{\text{negative-skew}}$ = –0.3¢, p = .024). Additionally, risk-taking was higher in the known-end condition than the unknown-end condition (Study 2: $M_{\text{known-end}}$ = +2.3¢ vs. $M_{\text{unknown-end}}$ = +0.3¢, p = .057). Furthermore, there was significantly more loss-chasing in the last round than the second-to-last round in the known-end condition, but not in the unknown-end condition (Study 2: $\beta_{\text{interaction}}$ = -0.049, p = .024).

Overall risk-taking (across the four rounds) was significantly affected by framing. Comparing the two positive-skew conditions in Study 3, participants invested more in the lottery when losing money in the investment was reframed as not gaining ($M_{\text{positive-skew}}$ = 10.3¢ vs. $M_{\text{no-gain}}$ = 11.8¢, p = .032). Framing the lottery as the default also increased overall risk-taking (Study 4: $M_{\text{invest-frame}}$ = 11.7¢ vs. $M_{\text{divest-frame}}$ = 13.7¢, p = .008).

Taken together, these results provide novel insights on the dynamics of, and overall attitudes towards, risk-taking. The motivation to erase a prior loss is a powerful driver of loss-chasing. Consumers who have accumulated a loss take on more risk when they are pre-sented with a risky investment opportunity that offers them a chance to recuperate that loss, and when that investment is the last opportunity to recover the loss. Moreover, changing the perception of the investment as potentially yielding a non-gain (rather than a loss) and shifting the reference point by setting investment as the default substantially increases overall risk-taking.

The Effects of Earmarking on Psychological Spending and Pain of Payment

EXTENDED ABSTRACT

Just as psychological ownership can be a continuum, the boundaries of spending money may not be as clear as once thought. Indeed, *psychological spending* (the feeling of having spent money) and *economic spending* (literally transferring the currency due for a good or service) may be significantly separated in time (Prelec and Loewenstein 1998). In the present research, we argue that setting aside money for a specific purchase (i.e., earmarking) begets the sensation of psychological spending. Thus, to some extent, earmarking separates psychological spending from economic spending—psychological spending occurs at the point of earmarking, while economic spending occurs at the point of purchase.

Once people earmark money and incur the psychological expense, they immediately begin adapting to their newly lower amount of money (Gourville and Soman 1998)—in the authors' original language, the payment is slowly psychologically *depreciated*. Imagine a consumer faced with additional expenses well after an original psychological expense has been incurred. Because the original payment has been psychologically depreciated, consumers may more freely pursue the new, additional costs. The separation of psychological spending from economic spending also has implications for pain of payment. We show that pain of payment responds to psychological—and not economic—spending, meaning that pain of payment may be transferred from the time of purchase to the time of earmarking, reducing pain upon purchase.

In Study 1, we examine the effect of earmarking on spending non-earmarked funds. Participants (N = 131) were told they received $200 as a gift from an extended family member. Participants were randomly assigned to one of two conditions (Earmark, Control). Participants in the Earmark condition were told they set aside $100 to spend on new clothes, while participants in the Control condition were told they considered spending $100 on new clothes, but hadn't committed to anything yet. All participants were then asked whether they would use $100 of their gift money to repair their computer, which had recently broken. Even though both groups had $100 in non-earmarked funds, 75% of participants in the Control condition were willing to spend the $100 to fix their computer whereas only 59% of those in the Earmarked condition said they would do so (p < .05). This suggests that participants view earmarked money as spent and thus, they felt they had a smaller budget for other expenditures from the same account, even though no money had actually been exchanged.

In our second study (N = 131), we examine the effect earmarking has in the face of increasing costs. If earmarking is no different from general mental budgeting, individuals should be hesitant to purchase goods when costs are higher than expected: if earmarked funds represent the totality of the account, then increased costs would take individuals "into the red" (Heath 1995). However, if individuals view earmarked funds as already spent, then increased costs a) represent a smaller marginal cost to acquire the good, and b) are in addition to funds that are already psychologically, if not economically, sunk. As a result, earmarking increases the likelihood of purchase in the face

of increasing costs. Indeed, individuals who earmarked funds for a specific purchase were significantly more likely to purchase the good after the price increased than individuals who had not earmarked funds (60% vs. 41%; $p < .03$).

In our first two studies, we showed that consumers who earmarked money behaved as though that money was already spent. In Study 3, we directly examine this feeling of psychological spending. Participants ($N = 50$) viewed a calendar showing a target car purchase date and rated feelings of already having spent the money for the twelve weeks leading up to the purchase. There was a significant linear trend such that feelings of having spent the money increased as the date of purchase approached ($ps < .01$). The linear trend was positive for 28 out of 50 participants and negative for only 11 out of 50 participants. These results imply that earmarking leads to greater feelings of having spent money, and those feelings increase as the time of purchase approaches.

In our final study, we investigate how earmarking affects pain of payment ($N = 299$). In the previous studies we show that earmarked money is more likely to be coded as "spent" than non-earmarked money. If this is the case, then that feeling of psychological spending should reduce pain of payment when the money is spent as intended. Participants were randomly assigned to imagine one of two scenarios: (1) that they had $950 split between a savings account ($350) and a checking account ($600) or (2) that they had $950 split between a savings account ($350), a checking account ($375), and a purchase-specific fund ($225). The second allocation is just a partitioning of the checking account in (1) between a non-earmarked amount and an earmarked amount. Participants were further randomly assigned to consider one of three target products: a book for a friend ($25), a gift for a friend ($75), or car repairs ($200). In all cases, the money in the purchase-specific fund was sufficient to cover the cost of the purchase and was consistent with the intent of the earmarking (e.g., a gift fund for a gift). To measure pain of payment, all participants were asked to rate how painful the purchase was on a nine-point scale (Not at all painful to Very painful).

The results from Study 4 show that purchases across all replicates were significantly less painful in the earmarked condition than in the non-earmarked condition ($p_{book} = .19$, $p_{gift} < .001$, $p_{car\ repairs} = .06$). Further, a model predicting pain by condition, controlling for replicate, found a significant negative effect of earmarking ($\beta_{earmarking\ manipulation} = -1.14$, $p < .001$). These findings suggest that spending earmarked funds (as intended) is less painful than spending non-earmarked funds.

Overall, our results suggest that the intentions consumers have for how they will use their money affects the perceived value of that money and how that money is used across competing purchases.

Avoiding a Discount to Pay the Full Price: Contingent Promotions Backfire When Redemption is Unlikely

EXTENDED ABSTRACT

"I used to really like those "buy one get one 50% off" tables at the bookstore. I'd browse through it, quickly find a book I liked, and then really push myself to find a "bargain" on another book. The problem was that out of the 30 books on the table, there was really only one I wanted to read." – The Simple Dollar

Price promotions generally make transactions more appealing (Blattberg and Neslin 1990; Raghubir, Inman, and Grande 2004), swaying consumers to buy from channels offering discounts. However, many price promotions come with a catch. To receive a discount on a focal purchase, consumers may need to first engage in certain behaviors (Inman, Peter, and Raghubir 1997) such as buying

multiple items from that channel (e.g. BOGO), buying within a limited time period (e.g. flash sales), or registering for membership in a special group (e.g. loyalty discounts). We categorize all of these deals as "contingent promotions". Our research explores consumer choices when they don't wish to do what it takes to qualify for a channel's contingent promotion (e.g. don't want to buy two items to qualify for BOGO). We find that consumers are more likely to avoid shopping at channels offering unqualifiable contingent promotions, as buying an otherwise desirable product from that channel is now seen as getting an inferior "deal".

A body of literature has confirmed that missing an attractive promotion could lead to perceptions of regret and brand switching (Kukar-Kinney, Xia, and Monroe 2011; Simonson 1992; Tykocinski and Pittman 1998; Zeelenberg and van Putten 2005). In this work, we propose that ongoing contingent price promotions can yield similar adverse effects when consumers acknowledge yet don't anticipate qualifying for these promotions. We use transaction utility theory (Thaler 1983) to explain how contingent price promotions can foster consumer disinterest. Specifically, we predict that consumers aware of a channel's contingent promotion would feel like they are getting a bad deal if they can't qualify for the promotion. We hypothesize that a channel offering an unqualifiable contingent promotion can cause consumers to buy a otherwise desired product from a competitor who doesn't offer a price promotion at all (S1) even if the competitor's product features are less preferred (S2) or offers the product at a higher price (S3).

Study 1 highlights an instance where consumers seek alternate channels to make a focal purchase when they don't qualify for a focal channel's price promotion. Mturk workers were presented two possible places to drink after work (A and B). Place A has happy hour discounts on weekdays, while Place B doesn't. We find that even though both places offered the same drink at the same price on weekends, participants thought that visiting A that weekend (M = 4.95; SD = 1.69) felt more painful/was a worse deal than visiting B (M = 5.47; SD = 2.02); t(61) = -2.05, p < .05) and participants significantly preferred to go to B more (66.1%; z = 2.53, p = .01). Study 1 depicts an instance where a channel offering a contingent price promotion can sometimes yield less consumer interest than one that offers no promotion at all.

Study 2 finds that consumers will buy a *less preferred* product to avoid a product associated with a contingent promotion they don't qualify for. Participants were asked which hotel out of two choices did they prefer, keeping price constant. We then told participants in the contingent promotion that their preferred hotel gives a welcome gift to loyalty members (participants were not loyalty members) while participants in the control condition were not aware of this promotion. There was a significant effect of condition on hotel choice; when the preferred hotel offered a loyalty member contingent gift, participants chose to book their more preferred hotel at 69.7%, a significant difference from the control condition at 88.1% (z = 2.50, p = .01). Condition type's effect on hotel choice was meditated by transaction utility of the promoted hotel, indirect effect 95% CI: [.023, .69]. Study 2 reveals that in order to avoid feeling like getting a bad deal on a preferred product that comes with an unqualifiable contingent promotion, consumers become more likely to buy a less preferred product that is unassociated with a promotion altogether.

Study 3 finds a case where a channel's contingent price promotion can drive consumers to buy an identical product from a different channel at a *higher* price. Mturk participants read that they needed to buy a specific focal product to fulfill an immediate need. The product sells at Store A, which offers a contingent promotion of varying magnitude across conditions (50% off orders over $100;

10% orders over $100; control: no mention of discount) that participants anticipate they can't qualify for. A similar item currently sells at a higher price at a competitor's channel (Store B). We found that when Store A offered a contingent, unredeemable promotion, more participants would rather pay more money to buy their needed item with Store B (χ^2(N = 320) = 10.57, p < .01, φ = .18), an effect that exacerbated as Store A's unqualifiable contingent promotion's discount magnitude increased. We tested whether transaction utility index would mediate the relationship between contingent promotion size and store choice to buy the focal product (PROCESS Macro Hayes 2018; model 4; 5000 bootstrap samples). We found that the indirect effect through transaction utility was significant (95% CI = [.063, .40]) in this model.

Firms should carefully assess the impact of their price promotions. While promotions encourage many customers to buy, they could also deter other groups of otherwise-interested customers. Stores offering a contingent promotion may lead some consumers to seek out competitors' products (S1), even if that competitor's product is less preferred (S2), or more expensive (S3).

Moderators and Extensions of the Interpersonal Sunk-Cost Effect

EXTENDED ABSTRACT

The sunk-cost fallacy—when a consumer pursues an inferior option because s/he has previously invested significant, non-recoverable resources to acquire it—represents a striking, but common, violation of rational decision-making (Arkes and Blumer 1985; Thaler 1980). Recent work uncovered an important variant of this phenomenon: the *interpersonal sunk-cost effect* (Olivola 2018). Whereas the 'classic', intrapersonal sunk-cost effect is driven by *one's own* past investments, the interpersonal sunk-cost effect occurs when a consumer alters his/her choice in response to *another person's* past investments. The interpersonal sunk-cost effect is a robust phenomenon with important theoretical and practical implications (Olivola 2018). Yet, little is known about its potential moderators or the factors that drive it.

Here, we examine several potential moderators of the interpersonal sunk-cost effect and document a novel, 'type II' variant of the effect.

Study 1 (N_{total} = 1,379) examined whether the sunk-cost effect is solely driven by the amount of prior investment (i.e., size of the sunk-cost), or also by the amount of social reciprocity/obligations (i.e., number of investors). Specifically, we tested whether adding an (additional) other investor, without changing the total amount invested, would increase the intrapersonal and/or interpersonal sunk-cost effects. Across three different consumer decision-making contexts, we compared responses to a standard intrapersonal sunk-cost (in which the recipient bore the entire sunk-cost) versus a 'mixed' intra/inter-personal sunk-cost in which the recipient and another person both contributed (equally) to the prior (sunk) investment, as well as responses to a standard interpersonal sunk-cost (in which one other person bore the entire sunk-cost) versus a 'multi-person' interpersonal sunk-cost in which two other people both contributed (equally) to the prior (sunk) investment. Critically, the total size of the sunk-cost was identical across conditions, to avoid confounding number of investors and investment size. We manipulated the presence (vs. absence) of a sunk-cost by having the investment either be refundable (sunk-cost absent) or non-refundable (sunk-cost present). As the dependent variable, participants indicated whether they would pursue the inferior option (i.e., honor the sunk-cost) or abandon it. As expected, they were far more likely to honor the prior investment

when it was non-refundable. However, across all three consumer decision-making contexts, adding an other investor (to either the standard intrapersonal or interpersonal sunk-cost), while keeping the total sunk-cost size constant, did *not* increase the tendency to honor the prior sunk-cost. This shows that sunk-cost effects are mainly driven by the size of the prior sunk-cost, and not by the amount of social reciprocity/obligations (i.e., number of investors) involved.

Study 2 (N_{total} = 1,151) examined whether the interpersonal sunk-cost effect is driven by an aversion to hurting the investor's feelings. Specifically, we tested whether the effect would be mitigated, or even disappear entirely, if the investor (the person who bore the prior sunk-cost) passed away before the recipient faced the decision to honor the sunk-cost. Across three different consumer decision-making contexts, we compared responses to a standard ('investor-alive') interpersonal sunk-cost (in which the investor was still alive at the time of the recipient's key decision) versus an 'investor-deceased' interpersonal sunk-cost, in which the investor died prior to the recipient's key decision. Participants imagined that the investor was one of their grandparents. In the 'investor-deceased' conditions, this grandparent had died (of natural causes) shortly after making the investment but prior to the key decision, and no one else knew about the late grandparent's (non-recoverable) prior investment. We also manipulated the presence/size of the sunk-cost. In all three consumer decision-making contexts, the interpersonal sunk-cost effect was directionally smaller in the 'investor-deceased' conditions (though the interaction between investor-deceased and sunk-cost size was significant in only one of the three scenarios). Combining data across the three scenarios, we find that the interpersonal sunk-cost effect is significantly smaller, though still significant, when the investor has passed away. Thus, the interpersonal sunk-cost effect is partly, but not entirely, driven by a concern with hurting the investor's feelings, so that people are less likely to honor large prior sunk-costs when investors are no longer around to potentially learn of this decision.

Studies 3a (N_{total} = 606) and 3b (N_{total} = 604) tested whether investors also exhibit an interpersonal sunk-cost effect; that is, whether they are more likely to prefer that recipients honor their prior sunk-cost (and pursue the inferior option) when it is large (vs. small/absent).

Study 3a compared, across three different consumer decision-making contexts, the preferences of participants in the role of investors, who imagined having invested either a lot (high sunk-cost) or very little (low/no sunk-cost) to offer a recipient an option that ended up being undesirable. Participants indicated whether, as investors, they would prefer that the recipient (a close friend or family member) continue with this undesirable option (i.e., honor their sunk-cost) or abandon it for a better option. In all three scenarios, participants were more likely to prefer that the recipient honor their sunk-cost when it was large.

Study 3b focused on one consumer decision-making context, but manipulated whether the recipient was a close friend, acquaintance, or stranger, to see whether social closeness (between investor and recipient) would moderate the 'type II' interpersonal sunk-cost effect observed in Study 3a. Regardless of social closeness, participants were more likely to prefer that the recipient honor their sunk-cost when it was large. Moreover, there was no main effect of, or interaction with, social closeness.

Taken together, these four studies reveal novel insights regarding the interpersonal sunk-cost effect. First, it is not sensitive to the amount of social reciprocity/obligations (i.e., number of investors) involved. Second, it does seem to be sensitive (in part) to whether the investor may be around to witness (or eventually learn) the recipient's decision to honor (or not) the sunk-cost. Finally, investors

also exhibit an interpersonal sunk-cost effect, as they are more likely to prefer that a recipient honor their sunk-cost when it was large, despite the fact that doing so leaves the latter worse off (consuming an inferior option).

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Discrete vs. Connected: How the Mental Representation of Time Impacts Goal Pursuit and Goal Fulfillment

Chair: Yanliu Huang, Drexel University, USA

Paper #1: Self-Regulation and Consumer Impatience

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Hyun Seung Jin, Queensland University of Technology, Australia

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Clinton S. Weeks, Queensland University of Technology, Australia

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Paper #2: Counting Time by Moments: The Effect of Photo Engagement on Goals

Kristen Duke, UC San Diego, USA

Wendy Liu, UC San Diego, USA

Paper #3: Spending Gained Time

Selin A. Malkoc, The Ohio State University, USA

Gabriela Tonietto, Rutgers University, USA

Paper #4: Helping Me See the Whole Picture: How Using a Paper versus Mobile Calendar Influences Consumer Planning and Plan Fulfillment

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SESSION OVERVIEW

As an internal representation of events and concepts (McKellar 1957), mental representation often triggers behavior that is consistent with the content of these representations (Dijksterhuis and Bargh 2001). The mental representation of time is particularly important for our goal achievement (Tu and Soman 2014). For example, the time representations where individuals treat each episode separately instead of connecting them to form an integrative picture often lead to less successful goal attainment (Huang and Hutchinson 2013).

The proposed session brings together four papers that answer two key questions: (1) how do moment-based vs. integrative mental representations of time influence consumers' goal pursuit processes? and (2) how can we leverage these effects to facilitate consumer goal achievement? The first three papers focus on the effect of the time representations on goal setting and goal activation, and the fourth paper examines the effect on goal fulfillment. In addition, the first two papers mainly focus on the negative impact of moment-based time representations, whereas the latter two papers focus more on the positive effects of considering time in an integrative manner.

The opening paper by Kim et al. investigates in five studies how performing self-regulation influences intertemporal decisions. They find that engaging in self-regulation makes people attentive to time. Consequently, consumers decrease the perceived value of products that will be delivered in the future, increase their willingness to pay for expedited delivery, and evaluate time-related product features as more important.

Second, Duke and Liu examine the effect of photo engagement, compared with merely reflecting on the past, on the activation of long-term goals. They propose and find through four studies that photo viewing promotes a discontinuous moment-based representa-

tion of time that subsequently suppresses long-term goals and choices such as saving, investing, or self-improvement products.

Third, in five studies, Malkoc and Tonietto propose and find that consumers have a different mental representation of gained time (due to a plan change) than free time. Since consumers tend to account for gained time, and it is easier to justify utilitarian (vs. leisure) activities that provide long-term benefits, people are more likely to choose work-like activities with their gained time.

Finally, Huang, Yang, and Morwitz examine in five experiments how planning mode impacts consumer behavior. They find that paper calendars help consumers focus on the global arrangement of the events, whereas mobile calendar interfaces encourage local attention by making people focus on individual days. As a result, paper calendar users develop more efficient plans and implement their plans more successfully.

Overall, these papers provide new insights into how the mental representation of time impacts goal pursuit process using a wide range of research methodologies (longitudinal surveys, field, and lab experiments). The session also addresses the conference theme of Becoming Wise by identifying factors that influence goal achievement. Giving the relevance of these topics to consumers and public policy makers, we believe this session will appeal to a broad ACR audience who are interested in time perception, mental representations, goals, consumer planning, and consumer welfare.

Self-Regulation and Consumer Impatience

EXTENDED ABSTRACT

Intertemporal decisions require consumers to evaluate costs and benefits that occur over a period of time (Frederick, Loewenstein, and Donoghue 2002; Urminsky and Zauberman 2015; Woolley and Fishbach 2016). A sales promotion may offer a rebate that will arrive in four to eight weeks. A car dealer may tell a customer that a vehicle can be financed over a period ranging from one to seven years. An on-line retailer may offer delivery times ranging from two days to two weeks. These time-based considerations are not inconsequential to decision making. For example, an 84 month car loan at 5% is 7.4% more expensive than a 48 month loan. Amazon Prime, a service originally positioned as a means of expediting on-line orders, had more than 100 million paid subscribers ($99 per year) as of April 2018 (Chowdhry 2018). Thus, time is a managerially and economically important decision variable, and matters to consumers.

This article investigates how acts of self-regulation affect intertemporal consumer decisions. Prior research has shown that acts of self-regulation influence decisions that are situated in the *present*. Acts of self-regulation encourage impatient behaviors in the present, including impulsive eating (Vohs and Heatherton 2000), impulse buying (Vohs and Faber 2007), and task disengagement (Laran and Janiszewski 2011). These instances of regulatory failure have been attributed to ego depletion, a state in which executive control resources have been reduced to a level where behavioral control becomes difficult (Baumeister, Schmeichel, and Vohs 2007). We show that acts of self-regulation influence decisions that are situated in the *future*. Acts of self-regulation reduce the perceived value of products that will be delivered in the future, as well as increase the willingness to pay for expedited delivery. We attribute this intertemporal impatience effect to the increased salience of time. Thus, we extend

understanding of the influence of self-regulatory behavior into inter-temporal decisions, but do so through an alternative process: time salience.

In Studies 1A-C, participants were randomly assigned to perform either a regulatory or non-regulatory task. They were then asked: 1A) how short or long they perceived three weeks in the future to be, 1B) how much they would be willing to pay for a set of movie passes if they were to receive these three weeks in the future, and 1C) how happy they would be if they were to receive a prize (they have won), three weeks in the future. Participants who performed the regulatory task 1) anticipated the given prospective time interval of three weeks into the future to be longer than those in the non-regulatory condition; 2) assigned significantly lower prices to the delayed product than those in the non-regulatory condition; and 3) reported that they would be less happy to receive a delayed reward than did participants who completed a non-regulatory task.

Study 2 tested the effect of performing self-regulation on impatient consumer choice decisions (express vs. standard delivery). We also compared the effect of self-regulation with that of boredom, which causes time salience temporarily (Eastwood et al., 2012), to examine whether the self-regulation effect persists over time delays. Participants were randomly assigned to one of the 3 (initial task type: non-regulatory, regulatory, boring) X 2 (time delay: no delay vs. delay) conditions. Participants in no delay condition made a choice decision immediately after the initial task, and participants in the delay condition completed a filler task prior to making the choice decision. When there was no delay after the initial tasks, both participants who completed the regulatory task or boring task were more likely to choose the express delivery (i.e., show impatience) than those who completed the non-regulatory task. On the other hand, when a delay was introduced after the initial tasks, participants who completed the boring task were no longer more likely to choose the express delivery option than those who completed the non-regulatory task, whereas participants in regulatory task condition did.

Study 3 examines a different form of consumer impatience: time-related product feature evaluation (Zhong and DeVoe 2010). Participants were randomly assigned to conditions as in Study 2. Participants were then presented with a laptop purchase scenario and were given a list of four features: one time-related target feature (processing speed) and three control features (hard drive size, design, and weight/screen size) and asked to rate how important each feature was to them. Participants in the regulatory and boring conditions both rated the processing speed as more important than did participants in the non-regulatory condition when there was no delay following initial tasks. However, when there was a delay between the initial task and rating attribute importance, participants in the boring condition no longer rated the time-related feature as more important as participants in non-regulatory condition did.

Our findings make two important contributions to consumer research. First, they provide additional insight into the effects of self-regulation by identifying novel consequences (i.e., time salience, an influence on intertemporal judgments). Second, they have the potential to motivate future investigations into how self-regulation and time salience influence judgments involving temporal discounting (e.g., affective forecasting, financial decision making, health-decision making, environmental policy, the value of time-based promotional discounts, sustaining goal pursuit).

Counting Time by Moments: The Effect of Photo Engagement on Goals

EXTENDED ABSTRACT

The advent of smartphones has heralded an era of countless pictures; an estimated two billion photos are shared on Facebook alone every day (Facebook 2015). Fueling this trend, many services exist with the express purpose of showing consumers their own past photographs, such as Timehop, a smartphone app with over 15 million registered users (Kosoff 2015), and Facebook's "On This Day" feature (Facebook Newsroom 2015), which periodically presents its 1.7 billion users (Facebook Newsroom 2016) with their past photographs. Thus, one's past is increasingly reviewed through photos rather than mere reflection. How does this frequent photo engagement influence consumers' cognitions, preferences, and choices?

We propose that photo engagement, unlike natural reflection, uniquely promotes a moment-based, discontinuous mental representation of time. This discontinuous representation suppresses long-term goals. As a result, we propose that viewing personal photos will decrease consumers' interest in long-term goals such as saving, investing, and improving themselves for their future well-being. Four studies test this theorizing.

Study 1 (longitudinal panel obtained by marketing research firm) tests whether chronic photo-viewing correlates with chronic orientation toward the present (vs. future). US participants (N = 9,406) answered, "If you won a $1000 lottery, how much of it would you spend versus save?" ("Spend $1000 and Save $0" to "Spend $0 and save $1000" in $100 increments). Their detailed demographics (age, gender, income, education, employment, relationship status, ethnicity, housing, state, etc.) were provided by the research firm. Three months later, they answered, "How often do you view photos you've taken (on any device)?" (1: A few times an hour when I'm not sleeping; to 6: Rarely). Results revealed a significant negative correlation between photo viewing frequency and saving (vs. spending) orientation (r = -.07, $t(9404)$ = 7.09, p < .001), which persisted even when controlling for all demographics (including strong predictors such as age; β = $28.07, $t(1877)$ = 4.28, p < .001). Frequent photo viewers intended to save less for the future.

Study 2 (N = 246; MTurk) tests for a causal link, demonstrating that personal photo engagement suppresses future-oriented goals. Participants either viewed their past pictures or reflected on the past, and then freely listed their current goals. Three coders blind to condition and hypotheses developed a catalog of themes and coded the responses. Although participants were equally likely to report goals related to family, friends, hobbies, and relaxation (*NS*), individuals who had viewed their photos became significantly less focused on long-term, utilitarian goals—listing fewer financial (4.1% vs. 14.9%, p < .01), career/educational (7.6% vs. 18.8%, p < .01), and general self-improvement goals (13.1% vs. 28.7%, p < .01). This suggests that future-oriented goals are less salient following personal photo engagement.

Study 3 tests whether the effect on active goals extends to consequential choices. MBA students (N = 192) either viewed their photos from the past six months or reflected on their lives in the past six months. Then, they made two consequential choices. In one, they chose between (a) a future-oriented, career-linked product (Bloomberg Businessweek subscription) or (b) cash; in the other, they chose between (a) a fun magazine (InStyle for F / Sports Illustrated for M) or (b) cash. Photo-viewing did not affect choice of the fun magazine over cash (23% vs. 26%; p = .69), suggesting that it did not simply prime photos or imagery. However, it significantly reduced choice

of the future-oriented magazine (49% vs. 57%; *p* = .048) over cash, consistent with our theorizing.

What drives this effect? We propose that photos differ from unaided memories in their temporal granularity: photos tend to represent events as discrete moments, while natural recall tends to represent events as swaths of time. This moment-based representation leads to a view of time as disconnected, thereby disconnecting oneself from time in the future. We also consider two other explanations: photos might simply be more concrete/vivid than unaided memories, and photos might also capture different content (e.g., fun events) than what is naturally recalled.

To test these competing mechanisms, Study 4 participants (*N* = 372) either (a) viewed personal photos from or (b) reflected on the past 2-5 months and then described the content of the photos they viewed/memories they recalled ("content descriptions"). Thereafter, they reported interest in future-oriented topics (career, retirement, financial health, educational tips, self-improvement) and neutral/entertainment topics (vacation, sports, weather, movies, fashion, games). As before, photos did not influence interest in neutral/entertainment topics (*M* = 4.05 vs. *M* = 3.91, *p* = .26), but significantly suppressed interest in future-oriented topics (*M* = 4.47 vs. *M* = 4.81, *p* = .007). A coder blind to condition and hypotheses coded: participants' content descriptions for content theme, whether they captured a specific moment versus a moderately to largely expansive swath of time (1 = not specific to 2 = specific), the level of detail provided (1 = none to 3 = extreme), and the vividness (0 = low or 1 = high). Unsurprisingly, there were differences in content: photo (vs. recall) participants were significantly more likely to mention relationships, travel, events, food, pets, selfies, art, and products, and significantly less likely to mention school, work, and general self-reflection (*p*'s < .05). However, the content difference did not mediate the effect on future-topic interest. Further, vividness differed by condition (*p* < .001), but also did not mediate the effect. There were no differences in levels of detail. In contrast, only granularity of temporal representation (specific moment vs. expanse of time) mediated the change in interest in future-oriented topics (β = -.10, 95% CI [-.21, -.01]). Thus, reflecting on the past via photos changes the granularity of one's temporal representation, thereby changing one's goal focus. Future studies aim to bolster this mechanistic evidence.

In summary, while research has begun to explore effects of photo *taking* (e.g., Barasch, Zauberman, and Diehl 2018; Barasch et al. 2017; Henkel 2014), less is known about the subsequent experience of photo *viewing*. The current research fills this gap and provide valuable guidance to policymakers and marketers wishing to better understand individual psychology and consumer welfare.

Spending Gained Time

EXTENDED ABSTRACT

Despite the steady decline in working hours over the last century (Huberman & Minns, 2007), consumers report feeling busier than ever. Further, consumers increasingly outsource their unpaid work, buying services like childcare and housekeeping (Whillans et al. 2017). These trends imply an increase in leisure consumption. However, hours dedicated to socializing have decreased over the last decade (ATUS 2017), potentially because when feeling busy, leisure activities are often jettisoned (Southerton, 2003). We study this paradox by examining how consumers can simultaneously crave more leisure, but do less of it. To do so, we explore how gained time (due to a cancelation or plan change) is consumed and propose that despite a desire for more leisure time, consumers may choose to work when they gain time.

Gaining time creates unaccounted time. Consumers often equate free time with "leisure time" (Unger & Kernan, 1983) believing it is free of obligations and thus will be used in a leisurely fashion. We argue that, when consumers gain time, they do not treat it as free and instead are driven to account for it. Consciously considering how to use time prompts consumers to think about their to-dos. This combined with a desire to enjoy uninterrupted leisure (Tonietto & Malkoc, 2016) might nudge them towards work-like activities.

Study 1 demonstrated this paradox - desiring leisure, but choosing work during gained time. We compared responses to gaining time during the same day to an unspecified future date. Unlike the present or near future, the (unspecified) future is often decontextualized from our daily demands (Zauberman & Lynch, 2005). As such, we expected when participants considered an unspecified future time that they would treat it as free and indicate a desire for leisure. However, when they gained time during the context of the same day, consumers would consider their to-do list and thus prefer work tasks.

175 undergraduates imagined either having gained a few hours in the next couple of weeks or later in the same day and indicated how they would spend this time (1=definitely leisure; 9=definitely work). We also measured participants' perceived time famine and their desire for more work and leisure in their life. Unsurprisingly, participants reported experiencing time famine (M=4.79; *p*<.01 compared to the midpoint of the scale). They also wished they had more leisure (M=5.06) than work (M=3.83, *p*<.01). Further, reported time famine was positively correlated with desire for more leisure (r = .28, *p* < .01), but uncorrelated with desire for more work (r = -.03, *p* = .63). Thus, it appears that participants crave more time to increase leisure consumption. However, comparing the consumption of specific and context-free time, we found that participants who considered gaining time that same day preferred work-like tasks (M=7.27) compared to those who considered gaining time in the context-free future (M=5.27, *p*<.01). Importantly, participants' desire for more leisure did not predict their intended behavior in either condition (both *p*'s>.90).

Next three studies compared gained time to time that was always free. In study 2, 153 MTurkers either imagined having 1.5 hours of free time that evening or unexpectedly gaining 1.5 hours that evening and reported how they would prefer to consume this time (1=fun and enjoyable tasks; 9=work-related task). As expected, we found that participants were more likely to choose work-like tasks when they gained time (M=3.17) than when they had time free (M=2.44, *p*<.05).

Since our studies rely on a certain level of specificity, in Studies 3 and 4 we examined whether differences in construal level (Trope & Liberman, 2010) account for our results. In Study 3, we used specific work/leisure descriptions and manipulated temporal distance. 342 undergraduates imagined having/gaining 1.5 hours either that evening or the same evening in one week and indicated their task preference (1=catch up with friend/family/neighbor; 9=catch up on errands/housework/chores). Note, that unlike study 1, participants in the distant future condition thought of a particular day in the future where they are likely to have context such as their usual work load for that time of the week. Once again, we found that participants who gained time preferred a work-like task (M = 5.46) compared to those who had time free (M=4.71, *p*<.01). Importantly, there was no main effect nor interaction of temporal distance (both *p*'s>.2). Thus, temporal distance that includes context is not sufficient to moderate the effect. To examine construal level from a different angle, in Study 4, we manipulated participants' mindset. Before indicating their preference (1=fun and enjoyable task; 9=work-related task), participants thought about why they would choose a work/leisure activity or how

they would go about engaging in a work/leisure activity. As before, we found that participants who gained time preferred work-like tasks (M=5.09) compared to those who had time (M=4.03, $p<.01$). Importantly, the how/why manipulation did not produce a main effect nor an interaction (both $p\text{'s}>.1$).

We next sought to provide evidence for our proposed account by measuring a preference to prioritize work. To rule out consumers' reluctance to engage in leisure during short periods of time, in study 5, we also used a 3-hour period. 202 participants imagined having or gaining 3 hours the same evening and indicated their activity preference (1=fun and enjoyable task; 9=work-related task). Next, we measured hyperopia, as well as participant's desire to prioritize work (i.e., I'd rather get some work tasks out of the way). As before, participants who gained time were more likely to prefer a work-like task (M=2.83) than those who had time (M=2.17, $p < .05$). This effect remained significant when controlling for hyperopia. Importantly, we find that participants' desire to prioritize work moderated the effect, where participants who prioritize work to a greater extent (-.27 standard deviations from the mean or higher) showed greater preference to work during gained (vs. free) time.

In sum, despite their desire to increase leisure in their lives, consumers may paradoxically prefer to work when given extra time in their day. This is because while gaining time creates free time, gained time is categorically different from free time.

Helping Me See the Whole Picture: How Using a Paper versus Mobile Calendar Influences Consumer Planning and Plan Fulfillment

EXTENDED ABSTRACT

With today's busy lifestyle, consumers often use various planning tools to help them set and fulfill plans. Creating schedules using a calendar is one common planning method that helps consumers manage their time (Kaufman-Scarborough and Lindquist 2003) and employees increase their work efficiency (Parke et al. 2018). With the prevalence of smart technology, many consumers use calendars on mobile devices. However, print calendars still thrive and attract significant sales (NPD 2016). While prior research has examined how planning or calendar scheduling influences goal pursuit or other aspects of consumer behavior (Townsend and Liu 2012; Tonietto and Malkoc 2016), to our knowledge, no research has investigated how the mode of planning (on paper vs. electronically) influences consumers' planning and subsequent plan fulfillment.

We propose that compared with using a mobile calendar, using a paper calendar helps consumers better organize and plan because it better helps them see the whole picture of the scheduled events. As a result, paper calendar users will develop more efficient plans and will be more likely to successfully implement their plans. Specifically, when consumers use a mobile calendar app, they often have to "open" a day to enter the details of a new event. As such, the mobile interface encourages local attention by making people focus on individual days. In contrast, paper calendars allow consumers to see their weekly schedule all at once when scheduling new events. We predict this will facilitate relational thinking and a heightened focus on the global arrangement of the events (Kühnen and Oyserman 2002). Consequently, consumers will be able to prioritize and organize more efficiently. This proposition is consistent with research showing that typing, compared with writing, inhibits formation of effective mental representation and clarity of thoughts (Mueller and Oppenheimer 2014; Oviatt et al. 2012). Furthermore, there is evidence that an efficient plan where consumers see the big picture and prioritize activities will often be implemented more successfully

(Dean and Sharfman 1996; Smith et al. 1990). We tested our hypotheses in five studies.

Studies 1-2 demonstrated the main effect that plans made through paper (vs. mobile) calendars are perceived as more effective in helping consumers see a big picture of the events. Study 1 ($N = 352$) was exploratory where participants indicated what types of calendar they use for their everyday planning and how they perceive using each type. Although more participants reported using mobile (vs. paper) calendars (57% vs. 32%, $p < .01$), they believed paper (vs. mobile) calendars facilitate seeing a whole picture when planning (measured through four items: "helping me see a whole picture when planning," "is an effective way to sort out what should be done," "easier to organize the tasks," and "effective in achieving the planning purposes." (Cronbach's α= .96; M_{paper} = 7.38 vs. M_{mobile} = 7.09; $p < .05$).

Study 2 ($N = 147$) replicated the effect using a specific planning task where undergraduate students were randomly assigned to make a week-long study plan using either a paper or a mobile calendar, and then answer questions about their plans. Participants who used paper (vs. mobile) calendars thought their plan was more effective (M_{paper} = 6.84 vs. M_{mobile} = 6.24; $p < .05$).

Study 3 ($N = 129$) tested the effect of calendar type on plan execution. Undergraduate participants were randomly assigned to either the paper or mobile calendar condition toward the end of the semester. They were asked to (1) plan for a study session for a self-selected course, (2) think of one leisure/relaxing activity, and (3) add both events to their calendars for the next two weeks. Participants were recontacted two weeks later and answered questions about their plan execution. A higher percentage of participants in the paper calendar condition (72.5%) than in the mobile calendar condition (47.8%) completed either the study or the leisure activity ($p<.05$).

Study 4 (N=553) replicated the effect on plan implementation and provided process evidence. Participants were asked to plan for the next 10 days on either a paper or a mobile calendar. They also thought of one thing that they often think about doing but haven't found a chance to do (e.g., read a book, exercise, etc.), and then scheduled this activity into their calendar. Their plan perception was also measured. Participants in the paper (vs. mobile) calendar condition again thought their plan was more effective in helping them see a big picture (M_{paper} = 7.28 vs. M_{mobile} = 6.94; $p < .05$). Also, replicating study 3, a higher percentage of those in the paper (vs. mobile) calendar condition completed their specific scheduled task (83% vs. 72%, $p < .05$.). Participants also indicated the extent to which they fulfilled their overall calendar plan during the last 10 days (Parke et al. 2018). Those in the paper calendar condition had more effective plan execution than those in the mobile calendar condition (M_{paper} = 7.45 vs. M_{mobile} = 6.90; $p < .05$), and this greater implementation was mediated by the perceived effectiveness of the plan (95% CI: [0.10, 0.46]).

Study 5 (N=505) provided further process support by priming global (vs. local) focus by asking participants to work on a shape task based on the overall form (vs. individual elements) in pictures (Gasper and Clore 2002). We later measured participants' self-indicated plan execution. As expected, there was an interaction effect between calendar type and global-focus manipulation ($p = .05$). Specifically, those with a paper calendar implemented their plan to a similar extent regardless of the big picture manipulation (M_{global}= 7.31 vs. M_{local} = 7.34; $p > .90$). However, those with a mobile calendar were more likely to fulfill their plan when being primed to focus on "big-picture" (M_{global}= 8.05 vs. M_{local} = 7.26; $p < .01$). The interaction effect was mediated by the perceived plan effectiveness (95% CI: [0.04, 0.49]).

In conclusion, we find that a plan created through a paper (vs. mobile) calendar is perceived as more effective in facilitating seeing a big picture of the scheduled event, which, in turn, leads to a greater likelihood of plan execution.

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Persuasion 2.0

Chair: Francesca Valsesia, University of Washington, USA

Paper #1: The Opportunities and Limitations of Using Virtual Reality in Charitable Appeals

Kirk Kristofferson, Ivey Business School, Canada
Michelle Daniels, Arizona State University, USA
Andrea Morales, Arizona State University, USA

Paper #2: Persuading the Bystander

Francesca Valsesia, University of Washington, USA
Kristin Diehl, University of Southern California, USA
Joseph C. Nunes, University of Southern California, USA

Paper #3: Changes to Clicks: References to Change Break Through the Clutter and Promote Persuasion

Daniella Kupor, Boston University, USA
Jayson Jia, University of Hong Kong, Hong Kong
Zakary Tormala, Stanford University, USA

Paper #4: Risk and the Rivalry Mindset: Promotions Involving Group Rivalries Increase Risky Consumption Behaviors

John P. Costello, Ohio State University, USA
Rebecca Walker Reczek, Ohio State University, USA
Robert W. Smith, Ohio State University, USA

SESSION OVERVIEW

"Persuasion is often more effectual than force"– Aesop

Technological advancements have transformed the ways in which consumers engage with companies over the past years. These changes have posed new challenges for marketers, who need to adapt to novel means of reaching, engaging and ultimately persuading consumers—whether through online advertisement, social media communication, or virtual reality. This special session addresses important theoretical and substantive questions regarding the effectiveness and implications of novel persuasive tactics in the ever-evolving technological landscape. In particular, the first two papers compare the effectiveness of different *modalities* of delivering the same persuasive appeal (i.e., using virtual reality and audience partitioning), while the third and fourth paper compare different *types* of persuasive appeals (i.e., appeals that reference change and rivalries).

Kristofferson, Daniels and **Morales** focus on a novel and understudied persuasion medium: virtual reality. They compare the persuasive consequences of using virtual reality and 360° 2D views in charitable appeals. They find that viewing a charitable appeal in VR (compared to 360° 2D views) increases engagement with the appeal's message and subsequently heightens empathy and support for the cause. Yet, very intense VR appeals can cause consumers to disengage as a self-protection mechanism.

Valsesia, Diehl and **Nunes** introduce *audience partitioning* as a novel persuasion approach in one-to-many communication that divides audience members into *addressed* and *non-addressed* recipients. They find non-addressed recipients are more persuaded by a persuasive message addressed at someone else (for instance, a social media post tagging another user) compared to those who are addressed implicitly (those reading a social media post without tags) or explicitly (those tagged in the post).

Kupor, Jia and **Tormala** examine what types of persuasive appeals can break through the clutter of online advertisements and heighten click-through rates. They find that appeals that reference change (e.g., a change in recipe) can boost consumer curiosity, trigger information-seeking, and heighten behavioral intentions. Importantly, the positive effects of references to change on behavioral intentions depend on consumers being able to review information about the change. Those who cannot prefer entities that have not changed.

Costello, Walker Reczek and **Smith** investigate what types of persuasive appeals induce consumers to engage in risky behaviors. They find that promotional appeals that feature rivalries unrelated to the brand (e.g., Ohio State vs. Michigan) can invoke a 'rivalry mindset', which lowers risk perceptions and causes consumers to take risks (e.g., try a risky product or share personal information on social media). This effect is particularly strong among consumers highly invested in one of the referenced rivals.

All papers are at an advanced stage of completion with multiple studies completed. Taken together, they shed light on novel persuasive tactics that leverage the changing landscape in technology and communication. In the spirit of the conference theme of expanding and creating wisdom, we expect this session to be of interest to researchers studying persuasion and social influence, as well as those interested in the impact of new technology on consumer behavior.

The Opportunities and Limitations of Using Virtual Reality in Charitable Appeals

EXTENDED ABSTRACT

Virtual reality is the "ultimate empathy machine". These experiences are more than documentaries, they are an opportunity to walk a mile in someone else's shoes. ~ Chris Milk, Founder, Here Be Dragons Virtual Reality Productions

Recent technological advancements have not only made low-cost access to virtual reality (VR) technology a reality, but also an affordable luxury for everyday consumers. Since the commercial introduction of VR in late 2015, VR sales have steadily climbed, with more than 1 million headsets sold in the third quarter of 2017 alone (Matney 2017). Interestingly, the sector at the forefront of producing VR persuasive content is charitable marketing (Neilson Insights 2017). Multiple charities have devoted significant resources to creating emotionally-charged VR appeals with the hope they will be more persuasive than more traditional mediums (Samit 2017). The goal behind these appeals is to harness the first-person point of view VR provides to elicit empathy and increase the probability of donation (Verocchi and Small 2009). However, research investigating the tangible persuasive benefits of VR above and beyond that of more traditional media-types is scant. This research seeks to take the first step in understanding the opportunities and limitations of this emerging technology.

We predict that viewing a charitable appeal in VR can increase subsequent support for the cause compared to viewing the same appeal in two-dimensional (2D) formats. Importantly, we identify engagement with the appeal's message as the psychological process through which VR increases empathy and subsequent support (Diehl, Zauberman, and Barasch 2015). However, drawing on research on information avoidance (e.g., Golman, Hagmann, and Lowenstein 2017), we argue that VR's empathy-inducing potential has limits. We propose that appeals with extreme content designed to elicit strong reactions will hinder consumer engagement with the appeal

as a means to cope with the content, and mitigate any downstream benefits on subsequent cause support. In all studies, we contrast a VR appeal with a 360-degree 2D medium and measure actual donation behavior. Thus, both formats are novel, cutting-edge tactics currently being explored by marketers, yet never tested theoretically for effectiveness.

Study 1 demonstrates that appeals viewed in VR (vs. 2D) elicit significantly higher donations. Undergraduates (n=203) received a $5 bonus for completing this study in addition to course credit and were run individually. Participants watched an appeal in VR or 2D from SmileTrain, a real children's charitable organization that offers free cleft repair surgery for children in impoverished nations. The appeal featured the story of a young girl in India and the impact the surgery had on her life. Upon completion, participants were given the chance to donate their $5 payment to the organization. As predicted, participants donated significantly more money when they viewed the appeal in VR vs. 360-degree 2D (M_{VR} = $2.25 vs. M_{2D} = $1.60, $p < .05$).

Study 2 shows support for our engagement process claim. Undergraduates (n=123) participated in this study in exchange for $5. Participants watched an appeal in VR or 2D about a real non-profit endangered species conservation organization. The appeal featured a baby rhino drinking her morning bottle and was uplifting in nature. Engagement was assessed by recording and coding automatic happiness responses (sessions video recorded and behavioral engagement coded 1-7). Upon completion, participants were given the chance to donate their $5 payment to the organization. As predicted, VR led to higher engagement than 360-degree 2D (M_{VR} = 3.00 vs. M_{2D} = 1.39, $p < .001$). Importantly, a larger percentage of participants in the VR condition (65.2%) than the 2D condition (38.6%) donated to the conservation organization ($p < .01$).

Study 3 examines the limitations of VR in charitable appeals. We propose that the extremity of negative content will moderate the relationship between media type and message engagement such that extremely intense charitable appeals in VR will inhibit message engagement. This is because the intense negative content in the VR appeal will cause consumers to react defensively and disengage with the message in the appeal as a self-protection mechanism (Taylor and Brown 1988). Study 3 tests this prediction using actual and edited versions of a real non-profit's VR campaign (Tree 4 Hope) created to raise funds to build a school for impoverished and abused girls in Guatemala. The audio message of the appeal was extremely intense in nature. We collaborated with the charity and changed their actual appeal to test our theoretical framework and predictions by creating an appeal of moderate intensity (content facts were consistent across appeals). As such, study 3 employed at 2(media type: VR, 2D) x 2(message extremity: high, moderate) design.

Participants (n=420) viewed either the actual (high message extremity) or edited (moderate message extremity) appeal in VR or 2D in exchange for course credit. Upon completion, participants completed engagement and empathy measures. Finally, participants were provided with a $2 bonus and given the opportunity to donate to the charity. The 2x2 ANOVA on engagement yielded the expected interaction ($p = .001$). When message extremity was moderate, VR led to higher engagement than 2D ($p < .001$); however, the benefits of VR were blunted when the extremity of the appeal was high such that no differences emerged between the two media types. As predicted, higher engagement led to stronger empathetic responses ($p < .001$), which in turn increased actual donations ($p = .001$). The extreme appeal (the charity's actual appeal), however, eliminated the engagement benefits of VR, mitigated the emotional responses, and did not increase subsequent donation behavior.

In conclusion, we examine the potential implications that virtual reality technology can have in the cause-marketing industry. We demonstrate both the potential opportunities and limitations of using this emerging medium in charitable appeals, and highlight the key psychological role that message engagement plays. By forcing the viewer directly into the perspective of cause recipients, virtual reality has the potential to elicit stronger responses and support than charitable marketers previously thought possible. However, without careful calibration, forcing donors to walk a mile in a cause recipient's shoes may lead them to close both their eyes and their wallets.

Persuading the Bystander

EXTENDED ABSTRACT

It is increasingly common for consumers to be exposed to persuasive attempts in the context of one-to-many communication, both on- and offline. One-to-many communication presents distinct communicative challenges, but also opens the door for the communicator to use new tactics to achieve her persuasion goals.

Imagine, for instance, a social media user scrolling through her Instagram feed and seeing a post by a beauty influencer, praising the benefits of a new detox smoothie. Similarly, imagine a consumer standing in line at an ATM machine when a volunteer from a non-profit organization approaches trying to collect signatures for a petition. In both cases, the communicator's intention to persuade will likely be apparent to the consumer and this persuasion knowledge might be enough for the consumer to raise cognitive defenses as a way of dealing with the persuasive attempt (Friestad and Wright 1994; Rule, Bisanz, and Kohn 1985; Schank and Abelson 1977; Campbell and Kirmani 2000). What happens if, instead, the consumer is simply a bystander to a persuasive attempt addressed to someone else? Consider, for instance, the situation when the influencer chooses to address her (still public) social media post to one of her friends (by means of tagging her) or a consumer listens in as the petitioner addresses another consumer in line.

What has changed in these scenarios is the *participation structure* of the influencers' and the petitioner's audiences (Goffman 1959, 1981; McGregor 1986). The participation structure of an audience describes the roles played by the various audience members. One way in which a persuasion agent can change participation roles is by dividing audience members into two categories: *addressed* recipients and *non-addressed* recipients. We refer to this as *audience partitioning*. When the audience is partitioned, those not addressed become bystanders to a communication addressed at someone else. In this work we argue audience partitioning can be an effective persuasion tactic in one-to-many communication and that bystanders would be more likely to be persuaded to try a detox smoothie or sign a petition compared to members of the addressed audience. We find that, when being exposed to a persuasive attempt addressed at someone else, consumers have lower barriers to persuasion than they would if they were members of the addressed audience. In other words, the persuasive message is met with lower skepticism and its persuasive effectiveness is greater.

Study 1 (N=248) tests the prediction that audience partitioning affects the efficacy of persuasive attempts. Respondents were asked to imagine they were at a bike store and heard another customer *asking a sales assistant about road bikes. We manipulated Audience Partitioned* by telling respondents that they either heard the conversation between the other customer and the sales assistant, or joined the conversation. Attitude towards the bike recommended by the sales assistant was significantly more positive when the audi-

ence was partitioned as opposed to not partitioned ($M_{\text{Partitioned}}$=6.04, SD=1.29, vs. $M_{\text{NoPartitioned}}$=5.67, SD=1.48, F(1, 246)=4.28, p=.04).

Study 2 replicates the findings of study 1 in a different persuasion setting. Two hundred and six college students read a scenario about being in line to withdraw some cash at the ATM machine, with another person in line behind them. We manipulated *Audience Partitioned* by telling respondents that a petitioner either approached the person behind them or approached both them and the person behind them. All respondents then listened to an audio file of the message the petitioner used to try and convince her audience to sign a petition to introduce *exam retakes* in their school. Attitudes towards retakes were more positive when the audience was partitioned and respondents were bystanders to the persuasive attempt ($M_{\text{Partitioned}}$=7.15, SD=1.82, vs. $M_{\text{NoPartitioned}}$=6.43, SD=2.25, F(1, 204)=6.43, p=.01).

Study 3 (N=220) replicates these findings in yet another setting while also providing evidence of process. Participants were asked to imagine being at a store and either being approached by a sales assistant alongside another customer or listening in to the sales assistant approaching another customer. They were then exposed to a sales pitch for a new multi-vitamin supplement. Attitudes towards the supplement were more positive when the audience was partitioned ($M_{\text{Partitioned}}$=5.54, SD=1.76, vs. $M_{\text{NoPartitioned}}$=4.99, SD=2.86, F(1, 218)=5.03, p=.03). Moreover, we measured persuasion knowledge activation (Kirmani and Zhu 2007) and found respondents were less skeptical towards the sales assistant when the audience was partitioned ($M_{\text{Partitioned}}$=4.66, SD=1.78, vs. $M_{\text{NoPartitioned}}$=5.50, SD=1.94, F(1, 218)=11.23, p<.01). Skepticism mediated the effect of audience partitioning on attitudes (b_{indirect}=.51, 95% CI [.200;.852]).

Study 4 (N=600) shows a boundary condition of our effect, while shading further light on the mechanism at play. If audience partitioning does indeed decrease barriers to persuasion, bystanders should elaborate a persuasive message more thoroughly and therefore be more persuaded only when the persuasive appeal contains a relatively strong (vs. weak) argument. We therefore ran a 2 (*Audience Partitioning*: Yes vs. No) x 2 (*Message Strength*: Strong vs. Weak) between-subject study. Respondents read the same scenario of study 3 and rated their attitudes towards the multi-vitamin supplement after being exposed to an appeal pre-tested to be either strong or weak. We find that attitudes towards the supplement were more positive when the audience was partitioned if the sales assistant made a strong argument ($M_{\text{Partitioned}}$=6.04, SD=2.13, vs. $M_{\text{NoPartitioned}}$=5.43, SD=2.03, F(1, 596)=6.80, p<.01) but not if he made a weak argument ($M_{\text{Partitioned}}$=2.93, SD=1.96, vs. $M_{\text{NoPartitioned}}$=2.96, SD=1.93, F(1, 596)=.02, p=.88, with $F_{\text{interaction}}$(1, 596)=3.88, p=.05).

This work is the first to investigate how audience partitioning could be used strategically to affect persuasion. In doing so, it contributes to the literature on persuasion and social influence by documenting a novel persuasive tactic that can be of interest to both researchers and practitioners alike. Moreover, it contributes to the literature on social cognition and communication, which has yet to investigate empirically whether, when and how people manage the participation structure of an audience in the context of persuasive communication.

Changes to Clicks: References to change break through the clutter and promote persuasion

EXTENDED ABSTRACT

Significant literature shows that consumers exhibit a longevity bias and prefer products that have existed in their current form for a longer duration (e.g., Eidelman and Crandall 2014). In contrast, we document systematic conditions under which persuasive appeals

cause consumers to prefer products that are framed as having less longevity. Specifically, we find that references to *change* in products not only prompt consumers to infer that those products have less longevity, but also—when consumers can search for further information about those products—trigger consumers to seek additional product information, which enhances consumers' preference for those products when this information search leads consumers to encounter compelling information about those products' benefits. This research answers a critical question that marketers face in the digital marketplace: How to motivate consumers to learn more about the products that they promote.

Study 1 tested our predictions in the field by launching online advertisements. The advertisements urged consumers to click on them to learn more about the cholesterol guidelines, and varied only in whether they indicated that these guidelines had changed. We examined the impact of this change reference on click-through rates: Click-through rates are a widely used measure of online advertising effectiveness (Forrester 2002), and a primary determinant of whether consumers click on online content is whether that content evokes curiosity (Alves et al. 2016). As predicted, the ad which noted that the guidelines had (vs. had not) changed generated a greater click-through rate, $\chi^2 = 11.11$, $p < .001$.

Study 2 tested the proposed mediating role of curiosity. Participants read the beginning of a report describing Gaia granola, and this information varied only it whether it indicated that Gaia's granola recipe had changed. After indicating their curiosity in reading the rest of the information, participants made a real choice about whether to view the rest of the information. Participants who chose to view the additional information then viewed actual Gaia promotional information (Gaia 2018). Participants who read that Gaia granola did (vs. did not) change were more curious ($t(413) = 3.98$, $p < .001$), more often chose to view the rest of the information ($\chi^2 (df = 1, N = 415) = 21.84$, $p < .001$), and were more likely to purchase it ($t(413) = 2.66$, $p = .008$). A serial mediation model with bootstrapping revealed that the reference to change fostered more favorable behavioral intentions because it heightened curiosity, and thus prompted greater information seeking (*95% CI*: .2708, .6628). Studies 3–4 documented the generalizability of this phenomenon by replicating it in two different domains: tourism and holiday shopping deals.

Importantly, participants also perceived the changed (vs. unchanged) entities in all studies as having less longevity ($ps < .004$). Study 5 reconciles the current findings with the longevity bias, which indicates that people often prefer entities that have existed in their current form for a longer duration (e.g., Eidelman and Crandall 2014). The longevity bias has been documented in contexts in which consumers cannot choose to view additional information about the focal entity; within these constraints, we predict that the longevity bias causes consumers to prefer unchanged products that have existed in their current form for a longer duration as a result of the absence of change. By contrast, when consumers are able to seek further information about products if they wish—as is often the case in the real world—we theorize that the opposite can occur. We tested this prediction in Study 5.

In Study 5, participants read the first sentence of a report noting that Target's warranty policy either had or had not changed, and then chose whether to view information about the policy. Participants who chose to view this information were then randomly assigned to either view their chosen information (which contained strong arguments about the policy's benefits), or to read that they could view the information later. As predicted, a 2 (Change Reference: No vs. Yes) × 2 (Information Available: No vs. Yes) binary logistic regression on the choice data revealed that participants more often chose

to view the information when the policy had (vs. had not) changed ($p < .001$). Also as predicted—because the information availability manipulation occurred after participants made their information choices—there was no main effect of this subsequent manipulation ($p = .888$), and no interaction with this subsequent manipulation ($p = .349$). In addition, a 2 × 2 ANOVA on participants' intentions to shop at Target revealed an interaction $F(1, 796) = 15.09$, $p < .001$: When participants did not view the additional information they selected before reporting their behavioral intentions, participants had more favorable behavioral intentions when they read that Target's policy had not (vs. had) changed ($p = .012$). By contrast, when participants viewed the additional information they selected before reporting their behavioral intentions, the reverse pattern emerged ($p = .003$).

Advertisers fiercely compete to motivate consumers to click on their advertisements in order to nudge them along the path to purchase. Advertisers often have the option to highlight aspects of products that have either changed or that have longevity (i.e., that have not changed for a substantial duration). This research is the first to find that framing messages around the notion of change can stimulate the consumer reaction for which advertisers frequently compete: the curiosity to learn more. We further find that the resulting change-induced information search can increase persuasion when consumers' information search leads them to encounter compelling information about the focal entity's benefits. However, because references to change not only spark curiosity but also signal that the changed entity has limited longevity, references to change can have the opposite effect when additional (compelling) information about the changed entity is unavailable. Thus, we both uncover a novel source of curiosity and also advance the longevity literature by illuminating conditions under which the reverse phenomenon emerges. In sum, framing messages and offerings around the notion of change can enhance their persuasive appeal by stimulating a precious cognitive reaction: the curiosity to learn more.

Risk and the Rivalry Mindset: Promotions Involving Group Rivalries Increase Risky Consumption Behaviors

EXTENDED ABSTRACT

Although marketing promotions commonly feature rival brands (e.g., Coke vs. Pepsi), marketers may also choose to invoke rivalries unrelated to a brand in promotions in an attempt to increase consumer engagement (e.g., 7-Eleven's Coffee Cup Election Day promotion, where participants can choose a Republican or Democrat coffee cup). Despite the use of these types of rivalry promotions in the marketplace, little is known about when and why this strategy may be persuasive to consumers. In this research we argue that rivalry promotions may be particularly effective when a brand wants consumers to engage in a risky behavior (e.g., trying a risky product, giving up one's personal information to a brand, etc.).

Research on rivalry in organizational behavior has shown that competition against rivals leads to riskier strategies in an effort to win (Converse and Reinhard 2016; To et al. 2018). We propose that even when a rivalry promotion features no opportunity to win, such promotions can lead to risky behaviors merely by referencing the rivalry because they invoke a "rivalry mindset." We suggest that this mindset encourages consumers to think of themselves in terms of their membership within the group involved in the rivalry, leading to decreased perceptions of risk to the self (Chou and Nordgren 2018; Park and Hinsz 2006). Consistent with the literature documenting spillover effects of mindsets (Gollwitzer et al. 1990; Wyer and Xu 2010), we predict that exposure to rivalry promotions can thus lead to subsequent risky behavior in contexts unrelated to the original promotion. Finally, we predict that this effect is strongest for those with high levels of group self-investment (Leach et al. 2018) for the group involved in the rivalry.

In Study 1 (n = 248) we test whether rivalry promotions increase interest in a risky product using a 2 (Promotion Type: Rival vs. Non-Rival) x 2 (Product Type: Risky vs. Non-risky) between-subjects design. Participants in all conditions engaged with a promotion that involved matchups for the focal university's basketball team. Promotion type was manipulated by featuring either a rival of the university where the study was held or a non-rival in the school's athletic conference. The promoted product was either Lay's Potato Chips (non-risky) or Lay's Mystery Flavor Potato Chips, an unknown and unusual chip flavor (risky). All participants first viewed a promotional display referencing the chips as a snack for watching an upcoming game and then completed a social media post about the promotion. Next, all participants indicated how likely they would be to look for the promoted potato chips in the grocery store. Analysis yielded our predicted interaction ($F(1,243) = 4.61$, $p = .03$). Participants were significantly more interested in the risky mystery chips in the rivalry condition ($M_{Rival} = 3.42$, $M_{Nonrival} = 2.65$; $F(1, 243) = 5.94$, $p = .016$); interest in non-risky chips did not differ by promotion type ($M_{Rival} = 4.75$, $M_{Nonrival} = 4.95$; $F(1, 243) = 0.38$, $p = .54$).

In study 2 (n = 298) we again manipulated whether a promotion focused on a rival or a non-rival school and examined how this influenced participants' choice of a risky or non-risky reward. We allowed participants to allocate six rewards coupons that either guaranteed $1 off a future Chipotle order or that offered an entry into a lottery that offered a 10% chance to win a $10 gift card to Chipotle. As expected, individuals in the rivalry promotion condition allocated significantly more of their rewards to the risky option ($M_{Rival} = 2.09$, $M_{Nonrival} = 1.61$, F(1,295); $p = .026$).

In study 3 (n = 171) we use a non-sports rivalry and employ the sharing of personal information with a brand as our measure of risky behavior. We also test whether the rivalry mindset can carry over to risky behaviors involving brands unrelated to the original promotion. To do so we conducted an experiment on Election Day 2018 inspired by a real 7-Eleven promotion. Depending on condition, participants either engaged in a promotion referencing the Democratic and Republican parties (rivalry condition) or the fall season (control condition). In the rivalry condition, participants chose a coffee cup representing their preferred political party and made a social media post with the cup and a caption about the rivalry. In the control condition participants picked a cup with their favorite fall color and wrote a post about why this cup is their favorite. Participants then imagined they walked to another aisle and saw a display advertising a sweepstakes for their favorite candy. They were told that they could gain additional entries into the sweepstakes by sharing personal information with the brand. Participants then provided their likelihood of sharing six pieces of personal information (e.g., email, race). Analysis indicated a significant effect of promotion ($F(1,168) = 4.48$, $p = .036$): Individuals who engaged in the rivalry promotion were significantly more likely to provide personal information ($M_{Rival} = 4.49$, $M_{Control} = 4.02$).

In study 4 (n = 203) we test the mediating role of risk perceptions and the moderating role of group self-investment. Participants were told their team was playing a televised football game against a rival or non-rival school, and that Johnsonville Brats had partnered with the pregame show and was asking fans "to create signs trash talking [school name] and its fans using #bringtheheat." Participants wrote a sign for this promotion and were asked whether they would provide six pieces of personal information to Johnsonville in an online form. Next they answered two questions measuring risk perceptions to the

self and three questions measuring group self-investment (Leach et al. 2008). Regression analysis revealed a significant interaction between promotion condition and group-self investment on number of pieces of information shared (β = .20, *p* = .047). Johnson-Neyman analysis revealed that rivalry promotions lead to significantly more information shared for those high in group self-investment. Moderated mediation analysis using PROCESS model 7 (Hayes 2017) showed that for those with a high level of group self-investment, risk perceptions significantly mediated the amount of personal data shared, with lower risk perceptions leading to more shared data.

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Whether, When and Why Self-Connections to Possessions Affect Owner Decisions in the Marketplace

Chair: Antje Graul, Utah State University, USA

Paper #1: Object History Value Shapes Owner Decisions in the Sharing Economy

Charis Li, University of Florida, USA
Chris Janiszewski, University of Florida, USA

Paper #2: Do Owners in a Consumer-to-Consumer Market Ever Prefer Renting to Less-Engaged Users?

Antje Graul, Utah State University, USA
Aaron R. Brough, Utah State University, USA
Mathew S. Isaac, Seattle University, USA

Paper #3: A Little Piece of Me: When Mortality Reminders Lead to Possession Donation

Lea Dunn, University of Washington, USA
Katherine White, University of British Columbia, Canada
Darren W. Dahl, University of British Columbia, Canada

Paper #4: Identities Without Products: Can Choice about Self-Linked Possessions be Attachment-Free?

Liad Weiss, University of Wisconsin-Madison, USA

SESSION OVERVIEW

This session explores whether, when and why the marketplace decisions of product owners are influenced by their relationship with the possession. The history of a possession can make it special or cherished to owners, who become emotionally attached and develop a strong possession-self link—and this can influence owners' preferences when consumers are disposing of their possessions (e.g., renting, donating). Similarly, situational factors and conditions may serve as triggers that impact owners' decisions to dispose of a possession. Specifically, this special session will address the following issues:

Research by Li and Janiszewski explores how an object's history can influence owners' willingness to share their possessions with others in the sharing economy, and the price they set. Three studies document these effects and draw implications regarding how sharing platforms can increase supply, facilitate matching of idiosyncratic supply and demand, and grow the sharing markets. Research by Graul, Brough and Isaac finds that owners in consumer-to-consumer rental contexts prefer users who engage with their product less (vs. more) and attributes the effect to a concern for wear-and-tear minimization in contrast to enjoyment maximization. This effect is moderated by the strength of owner attachment as well as whether the rental platform mitigates the financial risk of damage. Research by Dunn, White and Dahl presents five studies showing that reminders of one's own mortality can lead to materialistic and self-serving behaviors to explore a condition under which mortality salience leads to increases in giving away one's own possessions—when the donation act is high in transcendence potential. Research by Weiss questions whether the strength of consumers' attachment to a possession always affects their decisions about it and shows that consumers primed with a product-independent (vs. product-dependent) identity overlook the strength of their possession-self links; they therefore replace the use of their possessions with the use of rentals.

Together, all four papers in this session offer novel insights by examining the role of self-connections to possessions created by a possession's attachment history and whether, when and why it affects an owner's decision to temporarily or permanently part with the pos-

session. Discussion following the special session is expected to appeal to a wide academic audience, including those interested in possession attachment, identity, meanings, and transformative consumer research. As the recirculation of used goods becomes increasingly feasible with technological advances and important to environmental preservation, self-connections to possessions and their influence on owner decisions in the marketplace will continue to receive attention from consumer researchers.

Object History Value Shapes Owner Decisions in the Sharing Economy

EXTENDED ABSTRACT

The emerging sharing economy, especially online-platform-enabled peer-to-peer (P2P) rental, enables consumers to rent their personal possessions to others for a fee or access goods that other consumers own. For example, a person can rent a neighbor's car on Turo, a traveler can rent a spare bedroom in a host's home through Airbnb, an amateur filmmaker can rent a range of camera gear from professionals through ShareGrid, a college senior can rent a high-quality interview outfit from a business person though Style Lend. The quantity and price of shared goods in these markets depend on the willingness to share of owners with valuable possessions; and the matching of idiosyncratic supply and demand is the key to sharing platforms' success. We propose that the concept of object history value can help us better understand the sharing dynamics.

Owners assign history value to their possessions given the history the objects have witnessed, for example, how it was acquired, in what occasion it was used, who have used it, etc. Because object history value lies in one's perceived association between the object and its history, according to association theories (Anderson, 1988; Raaijmakers & Shiffrin, 1981; van Osselaer & Janiszewski, 2001; Zhang, Fishbach, & Kruglanski, 2007), we propose that 1) an object's history value is positively correlated with the meaningfulness of the history to which it is connected; 2) the object carries history cues or is a cue itself to the history with which it is associated, and the presence of the cues makes history value salient in one's valuation of the object in relation to other attributes; and 3) history value can be strengthened or diluted based on the association strength between the object and the history. In a P2P sharing setting, in particular, the owner and the renter can individually or interactively contribute to an object's history value, which influences the owner's willingness to share and price to set for a particular rental.

Study 1 tested, in a car-sharing context, whether owner-created history value will make owners less likely to rent their possessions, and whether removing history cues can increase the likelihood to rent with a 2(history meaningfulness: high vs. low) by 2(cue presence: present vs. absent) between-participants design. Participants imagined owning a 10-year-old car with visible dents and stains (cues) which were associated with either meaningful family memories or meaningless events, and these cues were either present or removed through renovation when participants were asked how likely they would list the car for sharing (1 not at all likely -7 very likely). We observed a two-way interaction ($F(1, 297) = 3.99$, $p = .047$): when cues were present, owners were less likely to share when the history was meaningful ($M_{high} = 3.88$, SD = 1.92; $M_{low} = 4.99$, SD = 1.81; $F(1, 297) = 12.65$, $p < .001$); when cues were absent, however, own-

ers became equally likely to share regardless of history meaningfulness (M_{high} = 4.65, SD = 1.83; M_{low} = 4.88, SD = 2.09; $F(1, 297)$ = .53, $p > .1$).

Next, in a music-instrument-sharing context, Study 2 tested how renter usage intent influences the owner's WTA as a function of the association strength between the object and its meaningful history. Participants imagined owning an heirloom piano from their late grandmother who used to play a specific music genre (classical or jazz, counterbalanced) or all kinds of music (control) with it. A renter who plays the same genre can strengthen the piano's association with grandmother, whereas a renter who plays a different genre can dilute the original association because a new association is established. We found that owners displayed the same WTA regardless renter usage intent when the piano's history was unspecified ($F(1, 394)$ = .12, $p > .1$), but were willing to reduce rent significantly for an association-strengthening renter (e.g., jazz renter playing a piano with jazz history) when the history was specified ($F(1, 394)$ = 4.41, p = .036; 2-way interaction $F(1, 394)$ = 3.00, p = .084).

Renter-created object history not only influences owner decisions when interacting with owner-created history; meaningful rentals alone can create positive history value. Therefore, owners should be motivated to rent their possessions to renters who can create meaningful rental history and charge them less. Sharing platforms such as Airbnb allow owners or non-owner agents to manage the rental of a shared good. We predict that non-owner agents are less influenced by renter-created object history value because they do not own the object and therefore do not own the history value. We tested these predictions in Study 3 with a 2(rental meaningfulness: high vs. low) by 2(participant role: owner vs. agent) between-participants design in an Airbnb (home-sharing) context. Participants assumed the role of either the home owner or an acquaintance of the owner who manages the rental and were given a simulated Airbnb host experience where they received a rental request from a person who was portrayed either as a celebrity or a normal renter and asked to adjust the price for the rental request. We found that owners charged the celebrity significantly less than agents (M_{owner} = $124.05, SD = 3.951, M_{agent} = $141.67, SD = 3.951, $F(1, 157)$ = 9.943, p = .002), but both owners and agents charged the average customer the same (M_{owner} = $132.55, SD = 4.154, M_{agent} = $130.46, SD = 4.100, $F(1, 157)$ = .128, $p > .1$; 2-way interaction F(1, 157) = 5.951, p = .016).

To conclude, we proposed and showed evidence for how object history value influences owner decisions in the P2P sharing economy. For sharing platforms, the concept of object history value and our findings provide key insights into how to increase supply, facilitate supply-demand matching, and grow markets for shared goods with different characteristics. Specifically, when shared objects bear history cues, platforms can encourage cue removal through renovation to increase supply, and strategic management of cues to match demands from various segments. When objects are history cues themselves, a better matching can be achieved through matching owner-created and renter-created object history.

Do Owners in a Consumer-to-Consumer Market Ever Prefer Renting to Less-Engaged Users?

EXTENDED ABSTRACT

Understanding owners' preferences in a secondary market place is important for consumer-to-consumer rental platforms, which depend on owners to provide a steady supply of products, as well as for users, who often compete with other users to rent an item. For example, highly-engaged users may communicate their enthusiasm for the product when interacting with the owner. How do such sig-nals of high (vs. low) user engagement affect owners' likelihood to approve a rental request?

From a theoretical perspective, the processes that might influence owners' decisions in a rental context are not well-understood. On one hand, renting to a highly-engaged user may feel benevolent, be personally validating, and create opportunities for the product to be enjoyed rather than stored—we refer to this motivation as *enjoyment maximization*. On the other hand, owners may be concerned that a highly-engaged user, by using the product more frequently, will place greater wear-and-tear on the product—we refer to this motivation as *wear minimization*. Prior research is agnostic as to which of these motivations will dominate owners' decisions in a rental context. Further, we predict that compared to weakly attached owners, strongly attached owners will be motivated to a greater extent by wear minimization. This prediction is based on the reasoning that for strongly attached owners, the product is imbued with emotional history that would be lost if the product were replaced. We conduct a series of three experimental studies.

Study 1 (n=359) examines whether owners prefer to rent their possessions to users who communicate low versus high levels of engagement by utilizing an experimental design in which user engagement (high vs. low) was manipulated between-participants, and product attachment was measured. Participants were instructed to imagine that they owned their primary residence and had listed it on a property rental site (i.e., Airbnb), where a potential guest had contacted them who was an author planning to write at their home (high user engagement) versus at a nearby coffee shop (low use engagement). Subsequently, we measured participants' renter preference over three items (α = .92) that were averaged to form a composite preference rating for the potential renter. We measured participants' attachment to their primary residence with a modified version of the Inclusion of the Other in the Self scale (Aron, Aron, and Smollan, 1992), which consists of seven Venn-like diagrams. The composite measure of participants' preference for the potential renter was regressed on user engagement (0 = low, 1 = high), their mean-centered attachment rating, and the interaction of these variables. We observed a main effect of engagement (B = -7.29, SE = 2.30, $p < .01$) such that owners preferred the low-engagement user (M = 73.56, SD = 20.12, N = 181) over the high-engagement user (M = 66.33, SD = 23.86, N = 178). We detected a significant interaction between engagement and attachment (B = -3.38, SE = 1.20, $p < .01$). Only among strongly attached owners, the low-engagement user was preferred over the high-engagement user.

The objective of study 2 (n=378) was to show that owners' emotional attachment affects their relative preference for users who communicate high versus low levels of potential engagement. In a 2 (product attachment) x 3 (product category) mixed design, participants learned they recently joined a product sharing website and planned to rent out products they owned and were strongly (vs. weakly) attached to. All participants were then informed that two interested renters responded to their listing, with one renter using it more frequently than the other. Our primary dependent measure was participants' strength of preference for one renter over the other. Participants also indicated the importance of considering differences in potential wear-and-tear and enjoyment when choosing a renter. A 2 (owner attachment) x 3 (product category) mixed ANOVA on renter preference returned a main effect of owner attachment ($F(1, 376)$ = 5.62, p = .018, η_p^2 = .02) such that participants in the strong-attachment condition preferred the low-engagement user relatively more than participants in the weak-attachment condition. Further, planned contrasts showed that strongly attached owners were motivated by wear minimization more than weakly attached owners. Mediation

analysis (Hayes 2013) revealed a significant indirect effect of attachment on renter preference through wear minimization (B = -3.61, SE = 1.42, 95% confidence interval [CI] = -6.47, -.88) but not through enjoyment maximization.

Study 3 (n=239) examines whether financial risk of damage affects the likelihood of strongly versus weakly attached owners to list their product for rent on a product sharing website that attracts high-engagement users. In a 2 (product attachment) x 2 (financial risk) between-participants design, participants were asked to think about a possession they were strongly [not at all] attached to for about $100 and imagined planning a vacation during which they were unable to use it. Only participants in the low financial risk condition read that the website offers a 100% money back guarantee. A 2 (owner attachment) x 2 (financial risk) between-participants ANOVA on listing likelihood showed a significant interaction of owner attachment and financial risk ($F(1, 235) = 5.09, p = .025, \eta_p^2 = .02$). Weakly attached owners were more likely to list their product for rent when their financial risk was low, whereas strongly attached owners did not differ. When financial risk was low, we found a significant indirect effect of attachment on renting likelihood through wear minimization (B = -8.08, SE = 3.14, 95% confidence interval [CI] = -14.55, -2.51) but not through enjoyment maximization. This result is in line with our theorizing that owners often perceive cherished possessions as unique and non-replaceable.

Together, these results expand our understanding of how product attachment influences owner decisions not only when selling possessions (Brough and Isaac 2012), but also when renting them. Managerially, our results suggest that platforms may be able to encourage owners to list their products by employing tactics that mitigate financial risk, but that such attempts may be less successful among strongly (vs. weakly) attached owners.

A Little Piece of Me: When Mortality Reminders Lead to Possession Donation

EXTENDED ABSTRACT

Humans have a unique ability to think self-reflectively. As such, we are faced with awareness that death is inevitable; a notion that creates existential anxiety. Terror Management Theory (TMT; Greenberg, Solomon, and Pyszczynski 1997; Solomon, Greenberg, and Pyszczynski 1991) suggests that, when faced with their own mortality, people engage in different forms of worldview defense that help buffer against this anxiety. For example, mortality salience (MS) has been shown to increase behaviors and attitudes that support cultural worldviews and defend against views that are counter to one's core beliefs (e.g., punishing those who disconfirm one's values; Greenberg et al. 1990).

TMT theory suggests that upholding cultural worldviews provides a sense of symbolic immortality—that one is a valuable part of something larger, more significant, and more resilient than one's own existence. In a capitalistic society, one cultural norm is to be materialistic. Thus, past work finds that MS increases materialistic and self-serving tendencies (Arndt et al. 2004; Kasser and Sheldon 2000; Mandel and Heine 1999; Rindfleisch, Burroughs, and Wong 2009). Therefore, one potential hypothesis is that MS should *decrease* willingness to give one's own possessions to others. However, we identify a novel mechanism through which mortality salience can increase possession donation – transcendence. We hypothesize that MS increases desire for transcendence (i.e., to be a part of something bigger than the self so one might exist beyond death) which can be attained by giving away things that are connected to the self. We make this prediction by drawing on other work that suggests that possessions are a part of the extended self (Belk 1988; Price, Arnould, and Curasi 2000). Thus, MS should increase giving behavior, but only when there is the potential for transcendence (i.e., the possession is highly connected to the self).

In Study 1, using a 2 (MS v. Control) x 2(Sign v. No Sign) between-subjects design, we explore whether MS increases actual donation of books when the self is connected to the possession, via a signature. Prior to arriving, participants were asked to bring a book they no longer use. Participants first underwent a MS manipulation and completed a filler task. They were then told that the university teamed with a local charity to do a book drive. In the *sign* condition, participants were told that the charity wanted them to write a small inscription and sign their name in the book. In the *no sign* condition, participants did not sign. Participants were asked whether they wanted to donate the book and, if so, to place the book in the donation bin. The results revealed that those under MS who signed the book were more likely to donate (51.3%) than the control condition (39.2%; Z = 1.90, p = .05). In addition, the MS condition were more likely to donate the book when they signed (51.3%) versus didn't sign (34.5%; Z = 2.70, p = .007).

In Study 2, we tested whether desire for transcendence motivated donation under mortality salience by asking people to choose between donating in way that connected the self to the possession (via an inscription) or not. We found that participants in the MS were more likely to choose donating with a personal inscription (60.2%) than the control (39.8%; Z= 2.03, p = .04; χ^2 = 4.12, p = .042).

In Study 3, we replicate the effects of donation intention from S1 using a different form of self-connected possessions. Using a 2(MS v. Control) x 2(Self-Connected v. Non-Self-Connected Possession) between-subjects design. Participants were asked to think about a self-connected or non-self-connected owned possession then randomly assigned to write about a MS or control experience. Finally, participants were asked their intentions to donate possession to a charity. Results revealed a significant interaction (F(1, 434) = 4.18, p = .04) such that when the possession was self-connected, MS led to greater donation intention (M = 3.03) than control condition (M = 2.46, t(434) = 2.42, p = .02). This study also found that participants under MS who thought about a self-connected possession and donated the item felt higher perceived transcendence.

Study 4, we examine whether the effects are eliminated when the desire for transcendence has already been satiated. This study utilized a 2(MS v. Control) x 2(Transcendent Group v. Non-Transcendent Group) between-subjects design. Participants were given a MS manipulation then told that they just joined a group that would either disappear once they were gone (*non-transcendent group)* or live on after them (*transcendent group*; Routledge and Arndt 2008). Finally, participants were asked how likely they would be to give a self-connected possession. Results revealed a significant interaction of experience and immortality (F (1, 375) = 3.98, p = .047). While the basic effect replicated in the non-transcendent group condition (MS M = 5.92, Control M = 5.38, t(375) = 2.11, p = .036), donation likelihood under MS decreased when participants had other means of transcendence ($M_{transcendent group}$ = 5.37, $M_{non-transcendent group}$ = 5.92, t(375) = 2.15, p = .032).

Finally, Study 5 demonstrated that the observed effects are mitigated when the donated items no longer allowed for transcendence (i.e., the possession would be broken down and recycled, rather than passed along to another person). Results revealed a significant interaction of experience and donation type (F(1, 393)= 3.96, p = .047) such that MS led to higher donation intention when the item was donated intact (M = 4.94) than recycled (M = 3.18, t(393) = 5.84, p < .001).

Taken together, this work provides evidence that transcendence is a novel mechanism through which MS results in increased possession donation. In contrast to past work that shows when MS will lead to selfish and materialistic behaviors, we show that MS increases giving when possessions are imbued with a sense of self. Counterintuitively, we find that MS prompts people to be more likely to give away items that are highly connected to the self because this is the condition under which self-transcendence is highest.

Identities Without Products: Can Choice about Self-Linked Possessions be Attachment-Free?

EXTENDED ABSTRACT

Previous research assumes that the strength of attachment consumers feel to an owned product always affects their decisions about that product. In contrast, we ask whether a strong possession-self link is sometimes not a determining factor in consumer choice. To address this question, we introduce a theoretical distinction between product-dependent and product-independent identities and test the impact of these identities on consumer choice. An identity is product-dependent if enacting that identity requires using particular tools or equipment. For example, enacting the identity of "cook" requires using specialized knives, rendering this identity product-dependent. Conversely, enacting the identity of "foodie" only requires using one's senses (e.g., one's taste to appreciate food), rendering this identity product-independent.

Building on the extant research on the dynamic use of various identity markers in delineating the boundaries of the self (Ferraro, Escalas, and Bettman 2011; Weiss and Johar 2013), we suggest that when the situationally active identity is product-independent, people will expect objects in general to be ineffective as identity markers. When people see their identities as less reliant on objects, they will be less likely to mentally symbolize objects in terms of the self, as "me" or "not-me," rendering these people less mindful of how strongly any possession is self-linked. Consequently, the strength of the possession-self link will have low (or even no) effect on consumer choice when the situationally active identity is product-independent.

We test this prediction in the context of the consumer choice between using a possession and using an unowned product, such as a rented version of this product. We predict that the expected preference of people with strong possession-self links for using their own possessions (vs. using unowned rentals; Bardhi and Eckhardt 2017) will weaken when a product-independent identity is situationally active. Priming product-independent identities will therefore increase the tendency to rent by people with strong possession-self links *without* weakening the strength of these links.

Methodology overview. In all the studies, we first manipulate the activated identity by having participants read the definition of either a product-independent or a product-dependent identity and then reflect on its personal relevance. Participants then choose between paying to participate in an upcoming activity using their own equipment and paying more to participate using better rentals.

Study 1 used 309 students. The primed identity was musicophile (product-independent) or audiophile (product-dependent). After participants were informed about an upcoming silent concert (where the audience listens to music via headphones), they then made an *incentive-compatible* choice between (i) paying to use a radio connector that will allow them to use their own headphones and (ii) paying more to rent the event's wireless headphones that have better sound. Participants' self-link to their headphones was then measured (it was *unaffected* by the identity manipulation; $p = .45$). A logistic regression showed that priming a product-independent identity increased

renting ($\beta = .67$, $p < .02$). The interaction with self-link strength was also significant ($\beta = 1.17$, $p = .0002$). Consistent with predictions, priming a product-independent identity reduced consumers' reliance on the strength of their headphones-self links: stronger self-links predicted [did not predict] less renting when the primed identity was audiophile ($\beta = -1.04$, $p = .0001$) [musicophile ($\beta = .13$, $p > .4$)]. Also consistent with predictions, the likelihood to use rented (vs. owned) headphones was significantly higher for the musicophile (vs. audiophile) condition mainly when the headphones-self link was strong (.128 SDs below the mean or higher).

Study 2 used 279 students. It incorporated two key changes: (i) the primed identities of outdoor enthusiast (product-dependent) vs. nature enthusiast (product-independent) were irrelevant to the product (headphones); (ii) a control condition with no identity prime was added. The incentive-compatible choice mirrored Study 1's results: Stronger headphones-self links (*unaffected* by the identity manipulation; $p = .52$) predicted less renting in the product-dependent ($\beta = -.75$, $p = .01$) and control ($\beta = -.48$, $p = .03$) conditions, but did not predict less renting in the product-independent condition ($\beta = .25$, $p > .22$). The likelihood to use rented (vs. owned) headphones was significantly higher for the nature-enthusiast (vs. outdoor-enthusiast [control]) condition mainly when the possession-self link to the headphones was strong (.063 SDs below [.69 SDs above] the mean or higher).

Study 3 used Study 2's (product-irrelevant) identities with 308 M-Turk workers. Instead of measuring the possession-self link strength, we pre-screened participants to include only those for whom we had ex-ante expectations about whether they would feel strong or weak self-links to headphones they imagined owning. Based on prior research (Morewedge et al. 2009) and pretesting, real-life ownership of headphones served as this indicator (own = strong self-link, not own = weak self-link). The renting choice mirrored results of the other studies. Strong (vs. weak) headphones-self links (based on the real-life ownership indicator) predicted less renting in the product-dependent condition (29% [24/82 participants] vs. 51% [38/75 participants], $p = .006$), but did not predict less renting in the product-independent condition (49% [37/75 participants] vs. 38% [29/76 participants], $p > .16$). Moreover, the likelihood to use rented (vs. owned) headphones was significantly higher for the nature (vs. outdoor) enthusiast condition only for participants with strong headphones-self links (49% [37/75 participants] vs. 29% [24/82 participants], $p = .01$), and not for participants with weak headphones-self links (38% or 29/76 vs. 51% or 38/75, $p > .12$). Finally, the effect of identity on renting was statistically mediated by participants' reliance on the strength of their self-links to products (measured after the renting choice using an established measure; Weiss and Johar 2013).

Study 4 used Studies 2 and 3's (product-irrelevant) identities with 221 M-Turk workers. It demonstrated the generalizability of the findings by replicating the results pattern in a different context (cooking master class) and product category (kitchen knives). Real-life ownership over kitchen knives served as an indicator for participants' strong self-links to the knives they imagined owning (as in Study 3). We discuss the implications of our findings for research on possession-self links and consumer identity and for the marketing of rental services.

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Reexamining Complexity: Dimensionality and Information Density in Consumer Decision Making

Chair: Nicholas Light, University of Colorado Boulder, USA

Paper #1: Keep It Simple (Sometimes): Consumer Perceptions of Brand Simplicity and Risk

Nicholas Light, University of Colorado Boulder, USA
Philip Fernbach, University of Colorado Boulder, USA

Paper #2: Using Consumers' Representation of Brands to Understand which Changes Disrupt Identity

Stephanie Chen, London Business School, UK
Oleg Urminsky, University of Chicago, USA

Paper #3: When Shrouded Prices Seem Transparent: A Preference for Costly Complexity

Shannon White, University of Chicago, USA
Abigail Sussman, University of Chicago, USA
Dustin Beckett, Consumer Financial Protection Bureau, USA

Paper #4: Low Complexity Drives Similarity Judgments within Sets of Stimuli

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Alexander Park, Washington University in St. Louis, USA
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SESSION OVERVIEW

Complexity is like obscenity: people know it when they see it. However, the seemingly intuitive nature of the construct of complexity has meant that consumer behavior researchers have devoted little attention to it. Though it has not been a hot topic, complexity's correlates are a *who's who* of phenomena that matter in decision making: perceived understanding, attention, motivation, effort, extremity of evaluations, and probability judgments, for example.

The proposed session explores two broad research questions:

1. What exactly does complexity mean? When consumers or researchers say something is complex, what are they describing?
2. What are the downstream marketing consequences of consumers encountering subjective and objective complexity in their environments?

The goal of our proposed session is to bring together previously disparate findings from work on branding, pricing, information processing, mental representation, and computer science in order to shed new light on how complexity affects consumer behavior. In presenting these four papers, we hope to begin to form a partial understanding of the construct, its antecedents and consequences, in a more systematic way than has been done in the past.

In the first paper, the authors explore what aspects of company marketing influence consumers' perceptions of simplicity/complexity of companies in general. They then test the downstream consequences of those perceptions on consumer beliefs about the risk of product or service failures.

In the second paper, the authors take a different approach to exploring how a type of complexity affects perceptions of brands. They examine whether consumers' representations of brands include beliefs about how features of those brands are causally related. They find that changes to features that are seen as linked to many other features of the brand are viewed as more disruptive to the consistency of a brand's identity.

In the third paper, the authors study the effects of complexity in the domain of consumer financial decision making. They find that consumers actually prefer more complex fee disclosures because they believe it signals transparency and facilitates decision-making. However, that same complexity can increase the likelihood of consumers choosing higher-fee options.

In the final paper, the authors demonstrate a mechanism for how consumers make judgments of similarity within sets of stimuli or products. They argue that groups of objects exhibiting some regularity in their differences (low complexity) are judged to be more similar than groups that do not, and show that consumers like product line extensions that are perceived to create more similar sets (i.e. sets of low complexity) than those that create less similar sets.

With this session, we hope to bring the topic of complexity squarely into the field of consumer research. We believe the session fits well with this year's conference theme, "Becoming Wise," because of the negative correlations of complexity and information density with feelings of knowledge and overconfidence, several of which will be discussed. The proposed session will appeal to researchers interested in judgement and decision making, mental representation, branding, and financial decision making.

Keep It Simple (Sometimes): Consumer Perceptions of Brand Simplicity and Risk

EXTENDED ABSTRACT

Many marketers believe that the current magnitude of marketing activity causes information overload among consumers (Spenner & Freeman, 2012). As a result, simplicity of branding has emerged as a widespread strategy for attempting to reach consumers through the clutter (Ahto, 2015; Siegel+Gale, 2017). At the same time, when they are overloaded with information, consumers are more likely to use decision making heuristics (Bettman, Luce, & Payne, 1998; Malhotra, 1984). We argue that one such heuristic exists and may cause unintended consequences of simple branding.

This work contributes to the literatures on branding, risk, and mental representation by examining a previously unexplored phenomenon whereby consumers feel that other aspects of a company should be simple due to perceived simplicity of branding. Across two studies, we show that: (1) consumers use branding simplicity as a cue to the simplicity of companies themselves; (2) this leads to decreased perceptions of risk for "simpler" brands; (3) which causes more dissatisfaction with eventual product or service failures (vs. "complex" brands).

Although empirical validation of a brand simplicity scale is beyond the scope of this project, the construct of brand simplicity is novel, and there is little related work in the marketing literature. Therefore, we conducted study 1 in an effort to better understand the antecedents of consumer perceptions of brand simplicity that could be subsequently used in an experimental study. Two-hundred sixty-six Amazon Mechanical Turk participants were recruited through TurkPrime (Litman, Robinson, & Abberbock, 2017)Mechanical Turk (MTurk. The survey contained 40 brand-conditions, and each participant was randomly assigned to only one brand-condition per session. The 40 brands in the survey included five brands each in eight different product categories: cars, mattresses, athletic shoes, mobile phones, financial services, insurance, hair products, and headphones.

We used structural equation modeling to empirically examine how consumer perceptions of branding elements and business pro-

cesses form latent constructs that contribute to consumers' overall perceptions of brand simplicity. We began with a theoretically-derived structural regression model which we subsequently refined.

We hypothesized the existence of three latent factors that contribute to consumers' perceptions of overall simplicity of a company: a visual/tangible factor, a process/understanding factor, and a dimensionality factor. We also hypothesized the existence of a fourth, "dependent" factor, which captures consumers' perceptions of the overall simplicity of a brand.

Initial model modification indices suggested removing the dimensionality factor, and the refined model was analyzed in Mplus version 8 (Muthén & Muthén, 2017). Output indicated a good fit for the hypothesized model, (c^2 (98) = 363.39, p = .00, RMSEA = .073, CFI = .963, TLI = .955). More interestingly for the study's goals, however, the standardized coefficient for the effect of the Visual/Tangible factor on the overall Simplicity factor was .61 (p = .00), and that of the Process/Understanding factor was .20 (p = .018). The standardized estimate of residual variance in the overall Simplicity factor was .47, indicating that the two predictor latent factors explained approximately 53% of its variance. No further model modifications were made. Based on the data, visual elements of branding appear to have a greater effect on consumers' overall perceptions of brand simplicity than perceptions of the simplicity/complexity—or understanding—of business processes.

Study 2 tested the hypothesis that consumers perceive less risk among brand products perceived to be simpler. 170 Amazon Mechanical Turk participants evaluated eight companies from four product categories (insurance, cars, headphones, and financial services). Participants evaluates the websites and ads from eight of the 40 brands in study 1. Participants answered randomly-ordered, questions measuring perceived overall simplicity/complexity of the brands, liking of the brands, and predicted risk of encountering unexpected problems with companies' products/services, as well as demographic measures. A linear mixed-effects model allowing for random effects for brand revealed the hypothesized effect of complexity on risk ($B_{complexity}$ = .32, t(182.9) = 8.75, p <.001). Over and above the effects of liking, consumers believe that simpler brands carry less risk than complex brands.

Study 3 was designed to provide further support for the causal effect of complexity on risk perceptions by manipulating complexity of branding in a within-subjects experiment. 617 Amazon Mechanical Turk participants were randomly assigned to evaluate two companies' marketing images from the same product category from five possible product categories (apparel, bikes, software, food services, and financial services). For their assigned product category, participants saw one simple and one complex marketing image, all of which were created by the experimenters (presentation order: simple or complex company first, was counterbalanced). For each company/image, participants answered questions about the perceived size of the company, professionalism, degree of luxury, and how much they liked the company. Lastly, participants were shown the marketing images again (order counterbalanced) and were asked to rate whether consumers from the simple or complex company (presented as Company A and Company B) were more likely to experience unexpected issues.

The complexity manipulation was successful: the average within-subject perceived difference in complexity between the complex and simple stimuli across the five product categories was 2.18 on an eight-point scale (t(616) = 27.88, p <. 0001). We used a linear mixed-effects model with random effects for category, four difference score control variables (complex minus simple) for perceived size, luxury, professionalism, and liking, as well as a contrast-coded presentation

order control variable, to test the effect of manipulated complexity on perceived risk of unexpected issues. Because the dependent measure in the experiment was a single bimodal measure with one company at one end and the other company at the other, we centered the dependent variable at the midpoint of the scale. This allows us to easily interpret and test the intercept of the model, with positive intercept values indicating perceptions of more risk for the more complex company, and negative indicating more risk for the simple company. As hypothesized, the model results show that consumers believe that more complex brands carry more risk than simple brands, over and above the effects of perceived differences in liking, luxury, professionalism, and size ($b_{intercept}$ = .21, t(608) = 3.09, p = .002).

Using Consumers' Representation of Brands to Understand Which Changes Disrupt Identity

EXTENDED ABSTRACT

Brands serve a variety of important functions for consumers. Brands are the basis for inferences that drive product use (Loken 2006) and are relationship partners (Aaker 2004). These functions are contingent on the brand keeping its identity—if consumers perceive that the brand has changed in ways that make it seem like a different brand, the relationships and inferences that the brand supported may be undermined. As brands must change in response to the evolving market, a major challenge is understanding which changes will disrupt the identity of a brand and negatively affect its relationship with its consumers and which changes will not.

The current research aims to answer these questions by exploring how consumers mentally represent brands. Building on research that suggests that the representation of consumers' own identities critically includes complex beliefs about how the aspects of the self are causally related (Chen et al. 2016), we examine whether representations of brands include beliefs about how the features of brands are causally related. Based on previous research (Rehder and Hastie 2001), we predict that changes to aspects of the brand that are seen as *causally central* (causally linked to many other features of the brand) will be seen as more disruptive to identity and more negatively impact purchase intentions, compared to changes to aspects that are seen as *causally peripheral* (linked to fewer other features).

Studies 1a (N=93) and 1b (N=89) examined whether changes to aspects of brands that are seen as causally central would lead to greater perceived disruption of brand identity (i.e., the perception that the brand is a different brand than it was pre-change). Participants reported a brand that they were loyal to (e.g., Nike), eight features important to the brand's identity (e.g., unique style, worn by athletes, globally known), the relationships that they believed existed between these features (e.g., Nike's unique style led to it becoming globally known), and to what extent a change to each feature would make them feel as if Nike had become a different brand. As predicted, changes to more causally central features were seen as more disruptive of brand identity (Study 1a: M_{corr} = .14, t(92) = 2.78, p < .01; Study 1b: M_{corr} = .19, t(88) = 3.29, p < .01). In Study 1b, we also found that changes to more causally central features more negatively impacted (anticipated) brand loyalty (M_{corr} = -.17, t(88) = 3.49, p < .01). Further, perceived disruption to identity mediated the relationship between causal centrality and anticipated change to brand loyalty (mean indirect effect was significantly less than 0, M = -.081, t(88) = 2.554, p = .012).

In Study 2 (N=60), we manipulated the same feature of the brand to be either causally central or causally peripheral. Participants read brand history scenarios of a brand that they were fond of (e.g., your favorite restaurant chain) that characterized how the

salient characteristics of the brand fit together. For example, one scenario described a restaurant chain with the following key features: 1) strong relationships with charities, 2) popular, 3) dedicated to sustainably-sourced food. Two versions of each scenario were developed so that the exact same feature (e.g., relationships with charities) was central for half of participants (linked to two other features, e.g., *the restaurant's relationships with charities led to its use of sustainably-sourced food and its popularity*) and peripheral for the other half (linked to only one other feature, e.g., *dedication to sustainably-sourced food led to the relationships with charities, and popularity*).

After reading about the brand's history, participants choose which of two current versions of the brand they would rather purchase from. Each was missing one feature (e.g., no longer had the relationships or the sustainable-sourcing). According to our account, participants should be more likely to pick the brand missing the peripheral feature than the central feature. Consistent with the hypothesis, participants were significantly more likely than chance to pick the brand missing the peripheral feature over the brand missing the central feature (65%, binomial sign test, $p < .01$). Thus, the exact same feature was perceived as being more or less important to identity depending on its causal relationships. Additionally, participants rated changes to the causally central features as transforming the brand into more of a different brand than changes to causally central features ($M_{central}$=62.07, $M_{peripheral}$=45.77, $t(59) = 3.25, p < .01$).

Further, perceptions that the brand had transformed into a different brand predicted participants' choice of brand. Participants were more likely to choose the brand that was missing the causally peripheral feature to the extent that they perceived that a change to the causally central feature changed brand identity more than a change to a causally peripheral feature (Wald = 20.82, $p < .001$).

In Study 3 (N=60), we replicated Study 2 with a type of serial brand (a brand that consumers expect ongoing changes to), sports teams. Participants preferred to buy a ticket to see the team that had a change to a peripheral feature (61.5%) than to see one that had a change to a central feature (38.5%, binomial sign test, $p < .05$). Additionally, participants rated changes to causally central features as changing brand identity more than changes to causally peripheral features ($M_{central}$=52.15 $M_{peripheral}$=38.79, $t(59) = 2.88, p < .01$). Finally, participants were again more likely to choose the team that was missing the causally peripheral feature to the extent that they perceived that a change to a causally central feature disrupted team identity more than a change to the peripheral feature (Wald = 5.63, $p < .01$).

In four studies, using both measure and manipulated causal centrality, we found that beliefs about the causal relationships between the features of a brand guide judgements about brand identity and brand use. Thus, communicating the relationships between the features of the brand—and not just a simple list of features or associations a brand holds—may be an important brand management tool. How consumers understand the causal structure of a brand's features helps determine which changes imperil brand loyalty.

When Shrouded Prices Seem Transparent: A Preference for Costly Complexity

EXTENDED ABSTRACT

Price is a major factor in most purchasing decisions, and firms can shroud (e.g., hide, obfuscate) costs in many ways (Gabaix & Laibson, 2006). For example, computational complexity makes it difficult for decision-makers to identify total costs, causing people to choose dominated options (Carpenter et al., 2018), which firms can exploit by making fees more complex, rather than lowering prices (Carlin, 2008). Yet, less is known about *demand* for complex dis-closures. Consumers prefer a type of complexity, price partitioning, in many circumstances (Abraham & Hamilton, 2018), but are these consumers' preferences for complexity aligned with their decision-making abilities?

We propose consumers can prefer more complexity despite complexity reducing their ability to identify total fees. While a vast literature has documented both people's desire to avoid useful information (see Golman, Hagmann, & Loewenstein, 2017) and people's tendency to seek non-instrumental information (Bastardi & Shafir, 1998; Eliaz & Schotter, 2007, 2010; Tsai, Klayman, & Hastie, 2008), less research has identified cases when individuals prefer to have information in cases where more information handicaps their decision making.

In five studies conducted on Mechanical Turk, we displayed fee disclosures for a consumer good. For Study 1 ($N = 256$), Study 3a ($N = 293$), and Study 3b ($N = 397$), the consumer good was prepaid cards; for Study 2 (N=610), the consumer good was either phone plans or prepaid cards; for Study 4 ($N = 932$), the consumer good was either phone plans, closing fees for purchase of a property, or wedding venues. Complexity was manipulated by unnecessarily disaggregating fees in ways that would not impact payoffs. For example, in the *complex* condition for prepaid cards, a category of "Initial Fees" included a "Card Acquisition Fee," a "Card Activation Fee," a "Service Fee," and an "Administration Fee"; these amounts were summed and displayed simply as "Initial Fees" in the in the *simple* condition.

Participants first completed a *preference elicitation task.* We displayed one of each type of disclosure side-by-side, holding total fees constant and highlighting this fact in the instructions. Participants clicked a radio button next to their preferred disclosure. Next, participants completed the *selection task.* Regardless of participants' disclosure preferences, we randomly assigned them to make an incentivized choice between two options that had the same disclosure type. For example, in Study 1, some participants chose between two prepaid cards with simple disclosures, while others chose between two prepaid cards with complex disclosures. We incentivized selection of lower-fee options with a bonus payment.

Across all studies and conditions, a majority of participants preferred complex to simple disclosures (Study 1: 70%; Study 2: 70%; Study 3a: 61%; Study 3b: 63%; Study 4: 55%). Additionally, participants in *complex* conditions were more likely to select higher-fee (financially dominated) options (all $\chi^2(1)s>8.42$, all $ps<.005$). In all studies, disclosure preferences were not significantly related to selecting the higher-fee card in the selection task, neither overall nor differentially across conditions (all $\chi^2(1)s<1.10$, all $ps>.296$) . Hence, participants on average preferred complexity that increased their likelihood of selecting dominated options.

After Study 1, which confirmed our primary hypotheses, we sought to identify whether people change their preferences after experience with the task of selecting lower-price options. Study 2 elicited preferences a second time after the selection task. Preferences did not significantly change from the first elicitation to the second elicitation (71% vs. 69% preferring the complex disclosure; $\chi^2(1)$=.47, p=.494).

To identify causal relationships between beliefs about disclosures and preferences for the complex disclosure, we tested warning messages in Studies 3a and 3b. In Study 3a, we found that warning participants that complexity leads to mistakes moderately decreased preferences for the complex display ($M_{control}$=68%, $M_{obfuscation}$=55%; $\chi^2(1)$=16.36, $p < .001$), an effect mediated by a decrease in participants' belief that more detailed disclosures enabled selection of lower-fee options relative to simple disclosures ($M_{No\ warning}$=1.57,

$M_{warning}$=.58, Welch's $t(290.88)$=2.40, p=.017; bootstrapped average proportion mediated=.31, p=.028).

In Study 3b, we found that an "obfuscation" warning, which warned that companies can increase complexity to obfuscate fees, decreased a preference for the complex disclosure with marginal significance ($M_{control}$=70%, $M_{obfuscation}$=59%; obfuscation vs. control: p = .088), an effect mediated by a decrease in the perceived transparency and trustworthiness of the complex disclosure relative to the simple disclosure ($M_{obfuscation}$=2.67, $M_{control}$=3.47, p=.021; bootstrapped average proportion mediated=.63, p=.016). Yet, we note that in Studies 3a and 3b, a majority of participants who viewed warnings still preferred the complex disclosure, believed on average that the complex disclosure enabled decision making more than the simple disclosure, and believed that the complex disclosures signaled transparency and trustworthiness more than the simple disclosure.

In Study 4, we tested a third type of disclosure commonly found in the real word: a complex disclosure with "summary information" making total fees easier to identify. The "summary information" condition included both disaggregated fees and total fees. When participants ranked each disclosure type, the summary information disclosure was preferred by most participants (71%), though participants again ranked the complex disclosure as more preferable than the simple disclosure (55%). Furthermore, participants assigned to the *summary information* condition in the selection task performed very similarly to participants assigned to the *simple* condition, and both of these groups performed better than participants assigned to the *complex* condition (all scenarios combined, DV=selection of higher-fee option: M_{simple}=.19 , $M_{complex}$=.30, $M_{summary}$=.20; *complex v. simple: p*=.002; *complex v. summary information: p*=.006; *simple v. summary information: p*=.801). Hence, the summary information disclosure both enabled selection of lower-fee options (relative to the complex disclosure) and was the most preferred.

We show that individuals can prefer complexity that costs them, believing the detail of complex disclosures to enable their decision making when it can actually do the opposite, allowing firms to shroud prices while appearing transparent. Furthermore, a comparison of interventions across studies suggests that policy solutions aiming to work with, or *channel,* consumer preferences could be more effective than informational campaigns to *change* consumer preferences.

Low Complexity Drives Similarity Judgments within Sets of Stimuli

EXTENDED ABSTRACT

Many day-to-day decisions require some sort of similarity judgment. For example, similarity judgments have found to affect decision time in choice (Bhatia & Mullett, 2018), preference between target and competitor products (Huber et. al, 1982), and line- and brand-extensions (Desai & Hoyer, 1993). Understanding the fundamental underpinnings of similarity judgments will therefore help us understand decisions in a variety of domains. Although many theories of similarity exist in the literature, we focus on two prevalent theories proposed by Tversky (1977) and Hahn et.al (2003).

Tversky (1977) theorized similarity as a function of feature-matching process. People weight the shared and distinct features of the two objects and combine these two into an overall similarity judgment. In this model, an increase in shared features and a decrease in distinct features both result in higher similarity scores. Hahn et.al (2003) theorized similarity as a function of representational distortions (transformations); increase in number of transformations would decrease similarity judgment. For example, (A) red triangle vs. blue triangle and (B) red triangle vs. blue square, (A)

only has one transformation (color) while (B) has two (color and shape). Under Hahn and colleagues' account, (A) would be judged more similarly than (B) due to fewer distortions.

Despite the prevalence of these two theories, both are limited to similarity judgments between two individual stimuli. The current research investigates how people judge the similarity between two or more objects and finds that groups of objects exhibiting some regularity in their differences are judged to be *more* similar than groups that do not. For example, participants believe a set comprising of "2,4,6,8,10" to be more similar than "2,4,8,8,10" even though the latter would be predicted to be judged more similarly under reasonable extensions of both Tversky's and Hahn's models.

More specifically, we conducted three studies to investigate how regularity in differences affects judgments of similarity, and two additional studies to test the downstream consequences on the evaluation of line-extensions.

We hypothesized that regularity in differences increase judgment of similarity when judging a group of objects that are all different in features. Our hypotheses are based on the concept of Kolmogorov complexity; which quantifies complexity as the length of the shortest computer program that can generate the representation. For example; under Kolmogorov complexity, a string composed of a million 1's will be classified as less complex than a thousand random alphabet characters since the former can be reduced to a shorter program. Effects of Kolmogorov complexity have been documented in the domain of liking and preferences (Evers et.al 2014) and sense-making (Chater & Lowenstein, 2016). Based on this research, we expected that Kolmogorov complexity could also play a role in similarity judgments.

In Studies 1-3 we tested the basic effect using a variety of abstract stimuli and products. For example, for Study 1 we used 56 strings of numbers, where each string was categorized into one of five conditions: (1) All same (e.g., "4,4,4,4,4"), (2) Equal intervals (e.g., "1,3,5,7,9"), (3) Two-same three-different (e.g., "2,6,0,0,8"), (4) Unequal intervals (e.g., "3,8,2,9,7"), and (5) Monotonic unequal intervals (e.g., "0,1,3,6,9"). We then asked participants to judge the similarity of all 56 strings. We expected the lowest ratings of similarity for the all-different strings without any regularity (Condition 4 and 5), and highest similarity judgments for the all equal strings (consistent with Tversky and Hahn et.al). Crucially, however, we expected a *higher* judgment of similarity for the strings exhibiting low complexity (regular differences) compared to the other conditions, even the condition in which the strings included identical numbers. As hypothesized, our results showed that items in the low complexity condition were judged to be much more similar than the other conditions (In Study 1: M = 54.99 vs. 47.78, 29.87, 34.71; respectively, ps <0.001). Study 2 served as pre-registered replications of Study 1 with an additional sixth condition, and using different stimuli (shapes) that allowed us to quantify exactly how low-complexity affects similarity judgments. Our results replicated those of Study 1 (all important p-values < 0.001).

In Study 3, we move from abstract stimuli to products to test whether we find the same effects when participants are asked to evaluate bundles of consumer goods. Consistent with studies 1 and 2, we find that when consumers evaluate assortments of sneakers, assortments that are low in complexity are evaluated to be *more* similar (M = 60.11, SD = 23.63) than assortments that do not (even if there is more objective overlap in features; M = 52.77, SD = 25.55, Z = 4.82, p < .001).

In Studies 4 and 5 we extend these findings to evaluations of line-extensions. In Study 4, we present participants with an assortment of sneakers, and ask them to evaluate new additions to the as-

sortment. These new additions either "fit" with the initial structure of the assortment (therefore keeping complexity low), or did not. We expected that, because products in low-complexity sets are perceived to be more similar to each other, participants would therefore hold more positive attitudes to these line-extensions. Consistent with the results of Study 3, target shoes were perceived to be a better fit when their addition would keep complexity low ($M = 64.05$, $SD = 23.48$) as compared to situations in which they increased the complexity ($M = 57.07$, $SD = 25.70$, $Z = 4.26$, $p < .001$). Study 5 replicates these findings using different flavors of beer, and having participants evaluate novel line-extensions.

To summarize, in 5 studies we find that the complexity of assortments affects both judgments of similarity, as well as evaluations of line-extensions. More specifically, the lower the complexity of the assortment, the more similar products in this assortment are perceived to be. Additionally, novel items that keep the complexity of the assortment low are perceived to be better line-extensions.

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Designing Better Practices of New Technology

Chairs: Gita V. Johar, Columbia University, USA
Byung Cheol Lee, Columbia University, USA

Paper #1: (No) Privacy Please: Power Distance Beliefs and Response to Privacy Breaches

Shilpa Madan, Columbia University, USA
Krishna Savani, Nanyang Technological University, Singapore

Paper #2: Time Flies…But Only When the Speed is "Just Right": How Animation Speed Affects Perceived Waiting Time

Yu Ding, Columbia University, USA
Ellie J. Kyung, Darthmouth College, USA

Paper #3: How Explanations for Recommender Systems Impact Consumer Acceptance

Phyliss J. Gai, Erasmus University, The Netherlands
Anne-Kathrin Klesse, Erasmus University, The Netherlands

Paper #4: Preference Unlearning: When Personalized Recommendations Reduce Preference Clarity

Byung Cheol Lee, Columbia University, USA
Gita V. Johar, Columbia University, USA

SESSION OVERVIEW

New technology generates new possibilities, but also new concerns. For example, developments in data-driven marketing practices have generated consumer concern over privacy (e.g., a recent data breach of over 50 million accounts on Facebook) or concern over diminishing sense of autonomy (Andre et al. 2017). How can the field of consumer research contribute to designing better technology practices? Developing a good practice of technology requires consideration of both managerial and consumer welfare implications. This session brings together four papers that examine consumer responses to new technology that have substantial managerial implications and consumer welfare implications. Consistent with the conference theme of *"Becoming Wise,"* this session aims to create new wisdom by documenting the problems emerging with practices of new technology in the marketplace and by using insights from consumer research to solve these problems.

The first two papers derives novel insights from theories to alleviate consumer concerns over current technology practices. **Madan & Savani** sets the stage by examining the consumer response to privacy breaches (e.g., Facebook) and by clarifying the psychological process that might help these organizations continue their relationship with its customers. They show that consumers high in power distance belief are less likely to blame organizations for the loss of privacy and prefer to resolve the privacy breaches by delegating control of their private information to the organizations (e.g., willing to pay a fee to Facebook to not sell their data to advertisers). **Ding & Kyung** uncovers a novel intervention to reduce consumer stress from waiting time online: the moving animation. Drawing from sensation-seeking theory and visual perception, they suggest that firms could use moderately fast moving animations to reduce perceived waiting time and to enhance engagement with subsequent tasks.

The last two papers focus on the emerging practice of data-driven product recommendations. They suggest that future practices of this technology should focus on enhancing consumer trust in the recommender system while preserving consumer autonomy. **Gai & Klesse** focuses on consumer distrust in data-driven product recommendations and examines the potential role of recommendation explanations in increasing trust. Their findings suggest that firms should use explanations that emphasize the recommender system is

recognizing the consumer's subjective taste. Yet, **Lee & Johar** suggest that these technology practices that facilitate the adoption of personalized recommendations might be detrimental to consumer well-being. They show that using personalized recommendations might reduce preference clarity – a sense that one holds clearly defined, internally consistent, and stable preferences – which might undermine self-efficacy with decision making.

The present findings in this session complement and advance our understanding of consumer response to new technology. These insights encourage the field of consumer research to take the lead in designing better practices of new technology, as technological advances are rapidly transforming consumer behavior. This topic will benefit from a lively discussion on the implications of technology (mal)practices on consumer well-being and on business opportunities.

(No) Privacy Please: Power Distance Beliefs and Response to Privacy Breaches

EXTENDED ABSTRACT

In this era of ubiquitous technology, data breaches are a common occurrence. Over 600 privacy breaches, affecting over 1.5 billion consumers, were discovered in 2018 alone (Axel 2018; Leskin 2018). Not surprisingly, in a recent survey, over 90% consumers said they were very concerned about internet privacy (BlueFountain Media 2018). However, these concerns do not seem to translate into actions (Barker 2018). After a recent data breach of over 50 million accounts on Facebook, over 60% people said they would continue using Facebook (Zantal-Weiner 2018). What predicts consumers' responses to such privacy breaches?

We posit that consumers can respond to privacy issues in one of two ways, i) *take control* of their privacy and ii) *relinquish control to* the organization. In the context of Facebook, taking control of one's privacy encompasses behaviors like reviewing privacy settings, deleting private information, and reduced use of Facebook. On the other hand, relinquishing control translates into behaviors such as continuing to use Facebook and perhaps even supporting Facebook by paying a fee to not sell consumer data to advertisers. We argue that the choice consumers make depends on the extent to which they hold the organization (e.g., Facebook) responsible for the privacy breach. This in turn is driven by the degree to which consumers accept that the organization is at a higher level in the society — or that power is distributed unequally resulting in hierarchies (Power Distance Beliefs; Hofstede 2001; Zhang, Winterich, and Mittal 2010). We posit that people high in power distance may perceive organizations such as Google and Facebook to be high in power and trust their authority, therefore being less likely to blame them for the loss of privacy and further, be less likely to challenge their authority in handling these issues. However, those low in power distance will hold firms accountable for their loss of privacy and hence, be more likely to take charge of safeguarding their own privacy.

Study 1 was designed to provide initial support for the idea that consumers high in power distance will be less likely to blame Facebook for privacy breaches. 103 US residents on Amazon MTurk completed the study. Participants were randomly assigned to the high (vs. low) power distance condition. We manipulated power distance beliefs using the sentence unscrambling task by Zhang et al. (2010).

Specifically, participants were asked to unscramble ten sentences in each condition. For example, high power distance condition emphasized the importance of hierarchy with sentences such as "Hierarchy is necessary for social order". On the other hand, the low power distance condition used sentences such as "Hierarchy is unnecessary for social order" to emphasize equality. After completing the sentence unscrambling task, participants were presented with a detailed scenario explaining that they were one of the 87 million Facebook users whose personal data was shared with Cambridge Analytica, which used their personal information to target them with political advertisements. We then asked participants to respond to two questions ("To what extent do you think Facebook is responsible for this privacy breach" and "To what extent do you blame Facebook for this loss of privacy?" *1 = not at all to 7 = extremely, r=.88*). A t-test revealed that participants in the high power distance condition ($M_{HighPDB}$=5.49) were less likely to blame Facebook and to hold Facebook responsible for the loss of privacy than those in the low power distance condition (M_{LowPDB}=6.16, t(101)=2.3, p=.024).

The second study was designed to accomplish two objectives. First, we wanted to understand if the extent of blame and responsibility assigned to Facebook for the privacy breach would lead to different downstream behaviors. Second, we wanted to control for other potential confounding variables, such as interdependence. One hundred US residents on MTurk completed the study. Participants first responded to the 5-item power distance beliefs scale (Yoo et al. 2010). They then read the same scenario as in Study 1 and proceeded to answer several related questions. Specifically, we asked the participants i) how likely they were to review their privacy settings on Facebook, ii) how likely they were to delete highly personal information from Facebook and iii) How likely were they to pay a small sum of money for Facebook to not sell their data to advertisers *(1=not at all likely to 7=extremely likely).* As theorized earlier, we expected participants low on power distance beliefs to take control of their own privacy (i.e., review privacy settings, delete personal information) and participants high in power distance to trust Facebook in resolving the privacy issue by paying Facebook to not sell their data to advertisers. Participants also responded to the two items from Study 1 measuring the extent of blame and responsibility attributed to Facebook, and the 12-item interdependence scale (Singelis 1994). Regression analysis showed that higher power distance beliefs predicted lower likelihood of taking steps to safeguard one's privacy (β=-.23, t(107)=-2.17, p=.039) — i.e., lower likelihood of reviewing privacy settings and deleting highly personal information. However, as expected, high power distance beliefs were positively related to willingness to pay Facebook to not sell their data to advertisers (β=-.43, t(107)=4.03, p<.001). The effects held even after controlling for interdependence. Finally, we tested the underlying mechanism of extent of responsibility / blame attributed to Facebook for the privacy breach. Mediation analysis using power distance score as the predictor, likelihood of reviewing privacy settings and deleting personal information as the outcome, and extent of blame / responsibility as the mediator in PROCESS Model 4 (Hayes 2017) revealed a significant indirect effect such that low power distance consumers were more likely to attribute responsibility to Facebook for the data breach and thus, more likely to take concrete steps to safeguard their own privacy (B=-.20, SE=.072, 95% CI [-.35,-.07]).

This research contributes to the nascent literature on power distance beliefs as an important construct predicting meaningful differences in consumer behavior. Further, we contribute to limited research on understanding increasingly rampant privacy issues in an interconnected world. Finally, this research has interesting implications for tech marketers for power distance based privacy management strategies.

Time Flies… But Only When the Speed is "Just Right": How Animation Speed Affects Perceived Waiting Time

EXTENDED ABSTRACT

With more online consumption behaviors moving from computer to mobile, waiting and churning on a webpage become more concerned by marketers. For instance, 73.1% desktop users abandon shopping carts, and mobile users 85.6%. Among the users abandon their carts, 26% indicated the reason being the checkout process too long (Baymard Institute 2018).

Waiting online is torture. Consumers are impatient: Web users abandon pages after even a mere two seconds of waiting time for information retrieval (Nah 2004). Yet given the limitations of technology, waiting is sometimes a necessary evil when consumers interact with technology interfaces. A critical question for managers is how to reduce the perception of waiting time that critically impacts how consumers evaluate their experience (Gorn et al. 2004, Sackett et al. 2010).

One way to try and reduce perceived waiting time is to introduce animation to decrease perceived waiting time. Research in interface design suggests that processing bars with accelerating speeds, relative to those with constant or decelerating speed, result in the shortest perceived waiting time (Harrison, Yeo, and Hudson 2010; Matthews 2011). Similarly, research in time perception suggests that time is perceived as passing more quickly if more versus fewer visual changes occur during a particular duration (Brown 1995; Hansen and Trope 2012; Allman et al. 2014). Both streams of research suggest that increasingly faster animation speeds should result in shorter perceived waiting time. However, we suggest that faster is not always better, and that animation speed can make time fly—but only when the speed is "just right." Five experiments (with robust replications) demonstrate that relative to fast animation speeds, moderate animation speeds during waiting time result in faster subjective time perception.

In Experiment 1a (*n*=615), US mTurk participants were directed to wait on a webpage (for 17 seconds, unbeknownst to participants) in the middle of the survey with either a picture of a static wheel, a slow-circling wheel (500ms per movement) or fast-circling wheel (100ms per movement). Immediately afterwards, they were asked to rate their subjective waiting time on a slider from 0 (very short) to 100 (very long) and their level of engagement. The fast-circling wheel resulted in shorter perceived wait times (35.4) relative to the static wheel (43.5, *p* = .001), but the slow-circling wheel resulted in an even shorter perceived wait times (30.6) relative to the fast-circling wheel (*p* = .04). Experiments 1b-1e replicated these effects for multiple time durations (7s, 13s, 15s, 17s), different animation pictures (wheel rotating and snail moving), different scales to measure time perception (7-point and 100-point), and different participants (Mturk adults and university students). Furthermore, three replications found that animation speed had no effect on objective waiting time estimated in seconds, but significantly affected perceptions of subjective waiting time.

Experiment 2 (*n*=423) tested whether the effects of animation speed extend beyond time perception to task motivation. U.S. mTurk participants were asked to solve 10 arithmetic problems (e.g. 17*5=?) and under each problem participants saw a static snail picture, a slow-moving snail (400ms per movement) or a fast-moving snail (100ms per movement), and the page advanced automatically after 40 seconds. While participants in the static (3.45) and fast-mov-

ing (3.51) conditions solved the same number of problems ($p = .78$), those in the slow-moving condition (4.06) solved more problems than those in both the static ($p = .008$) and fast-moving ($p = .013$) conditions. The total number of problems answered followed a similar pattern of results. These results suggest that the slow-moving animation increased people's speed in working through the math problem, consistent with perceiving that time was moving faster in the slow-moving animation condition. Thus animation speed can benefit task speed without sacrificing accuracy, suggesting a novel intervention to the traditional speed-accuracy trade-off which can increase performance (Wickelgren 1977; Förster, Higgins, and Bianco 2003).

In Experiment 3, we explicitly test the hypothesis that there is an optimal animation speed that is "just right" by testing seven different speeds (static, 50ms, 100ms, 300ms, 500ms, 700ms, 900ms), following the same procedure as Experiment 1a. As shown below, there is a significant quadratic effect of animation speed on subjective time perception ($b = 0.61$, *Robust SE* $= 0.29$, $t = 2.10$, $p = .036$), although animation speed had no linear nor quadratic effect on objective time estimates ($ps > .2$).

In Experiments 4 and 5, we tested the boundary conditions of this effect. Similar to the procedure of Experiment 1a, we added in another factor in Experiment 4 that we told half participants "please wait" while the other half "please wait for about 20 seconds." Results showed that the effect only holds when participants are not sure about the waiting time ($b = 7.88$, *Robust SE* $= 3.00$, $t = 2.63$, $p = .009$), but not when they were informed about the waiting time ($b = -3.30$, *Robust SE* $= 2.86$, $t = -1.15$, $p = .25$), interaction $b = -10.81$, *Robust SE* $= 4.15$, $t = -2.61$, $p = .009$. In Experiment 5, using similar procedure of Experiment 1a, we either asked participants to indicate their subjective time perception right after waiting or after a 3-minute irrelevant filler task. Results showed that the effect only holds when consumers responded immediately after the waiting ($b = 11.64$, *Robust SE* $= 3.56$, $t = 3.27$, $p = .001$), but not retrospectively ($b = -0.30$, *Robust SE* $= 4.20$, $t = -0.07$, $p = .94$), interaction $b = -11.94$, *Robust SE* $= 5.50$, $t = -2.17$, $p = .031$.

Together, these studies demonstrate that animation speeds can materially influence people's subjective time estimates. Relative to static or fast-moving animation speeds, more moderate animation speeds result in the lowest perceptions of waiting time (Experiment 3), higher levels of engagement (Experiment 1a) and motivation (Experiment 2), when consumers are uncertain about the waiting time (Experiment 4) and responded right after their waiting experience (Experiment 5). Future research can investigate factors that influence optimal speed and the types of customer experiences that are improved by reducing perceived waiting time in mobile or other technology contexts.

How Explanations for Recommender Systems Impact Consumer Acceptance

EXTENDED ABSTRACT

Consumers frequently receive personalized product recommendations from companies. To improve the accuracy of these recommendations, existing recommender systems incorporate both user-based input (i.e., common preferences across users) and product-based input (i.e., common attributes across products) (Amatriain and Basilico 2016). Such a hybrid approach provides companies with flexibility in terms of what they want to highlight (users or products) when explaining the basis for their recommendation to consumers. Some companies adopt *collaborative* explanations, highlighting the overlap in preferences among users (e.g., "Customers who viewed this item also viewed"), whereas others employ *content-based* ex-planations (e.g., "More in Health") (Tintarev & Masthoff, 2011). We investigate how the two different types of explanations —while keeping the actual recommendation constant—impact consumer acceptance of recommendations.

Both collaborative and content-based explanations signal to consumers that a focal product and a recommended product relate in some way. Collaborative explanations suggest that the two are related because they have been consumed or liked by the same group of customers, whereas content-based explanations indicate that the two products are similar to each other. Thus both explanations should increase consumers' awareness that the basis for the recommendation is product-matching. But only the collaborative explanations also highlight the preferences of others who are similar to the consumer. Therefore, relative to content-based explanations, collaborative explanations prompt consumers to recognize that the recommendation is based on taste-matching between users. We propose that whether consumers trust or distrust this taste-matching depends on to what extent they see others' tastes as self-relevant. This proposition is in line with prior work showing that people only follow others' behavior when they feel connected to others (Bearden and Etzel 1982; Cialdini and Goldstein, 2004).,

Study 1 tests how the two types of explanations impact perceived accuracy of recommendations. We sent an online survey to subscribers to a company that publish their original articles on social media. We received 757 complete responses (519 females, Mean of age = 24). Participants were randomly assigned to read either a collaborative ("People who like this also like") or content-based explanation ("More in [a major category of their articles]"). Both explanations had been adopted by the company (for study 3, see below) before the survey was distributed. Participants were asked to evaluate the recommender system based on the explanation they read. One of the questions taps into the perceived accuracy of the recommendation ("The recommender system can accurately predict what I like", 1 = strongly disagree, 6 = strongly agree). Toward the end of the survey, participants indicated how long they have subscribed to the company (from under 3 months to over 3 years). We assume that longer subscribers would be more likely to see other users' preferences as self-relevant. Indeed, a linear regression shows that the length of subscription positively predicts the perceived accuracy of the recommendation for people who read the collaborative explanation ($p = .070$) but not for those who read the content-based explanation ($p = .376$; p of the interaction = .057).

In study 2, we look at how the two types of explanations influence the intention to click on recommended books. Participants (N = 170 from Amazon Mechanical Turk, 73 females, Mean of age = 36) viewed four simplified Amazon webpages of books. On each page, there was a focal book and a recommended book. Participants were randomly assigned to read the collaborative explanation ("Customers who viewed this also viewed") or the content-based explanation ("Similar to this item") for the recommendation. Participants indicated whether they would click on the recommended book (1 = not at all, 10 = definitely). Then they rated how attractive the focal books are. Based on their ratings, we selected the most attractive focal book for each individual for later analysis. Toward the end of the survey, participants reported to what extent other Amazon customers can represent their own tastes. Given our theorizing, we expect that this factor would positively predict the effectiveness of the collaborative explanation. This is indeed the case ($p < .001$). On the other hand, the relationship does not hold for the content-based explanation ($p = .207$; p of the interaction = .043).

Study 3 and 4 examine the impact of explanations on real behavior. Study 3 is a field experiment in collaboration with the com-

pany in study 1. Pre-selected articles were randomly assigned to be recommended with the collaborative explanation or with the content-based explanation. Numbers of reads of focal articles (which embedded the recommendations) were also recorded. More reads mean that the focal article is more appealing to readers and thus makes the taste-matching as suggested by the collaborative explanation more credible. In support of this, focal reads positively predict the reads of the articles recommended with the collaborative explanation ($p < .001$) but do not with the content-based explanation ($p = .275$; p of the interaction $< .001$). In study 4, we let 200 undergraduate students choose a funny movie scene to watch during the break of a lab session. After they finished watching, they rated how much they liked the video by giving 1 to 5 stars and received another recommended video. Participants were randomly assigned to view the collaborative ("People who watched this also watched) or the content-based explanation for the recommended video ("More of funny movie scenes"). Consistent with study 3, we find that the rating of the focal video positively predicts the likelihood to watch the recommended video with the collaborative explanation ($p = .002$) but not with the content-based explanation ($p = .369$; p of the interaction $= .064$). Moreover, among students who did watch the recommended video ($N = 54$), those who viewed the collaborative-explanation gave higher ratings to the recommended video than those who viewed the content-based explanation ($p = .062$).

Taken together, our findings illuminate how collaborative and content-based explanations differ in their impact on consumer acceptance of product recommendations. The results also highlight the variables that managers should consider to leverage the value of explanations for recommender systems.

Preference Unlearning: When Personalized Recommendations Reduce Preference Clarity

EXTENDED ABSTRACT

Personalized product recommendations are rapidly changing consumer behavior. In 2013 already, 35% of what consumers purchase on Amazon and 75% of what they watch on Netflix came from data-driven product recommendations (MacKenzie, Meyer, & Noble 2013). While this trend opens up a new landscape of consumers delegating decisions to technology that knows their subjective preference well, the consequences of using personalized recommendations remain underexplored. We show that, while consumers believe using personalized recommendations will increase preference clarity — the sense of having a clearly defined, internally consistent, and stable preference on a certain product domain — actually using personalized recommendations undermines preference clarity ("preference unlearning effect"). We further show that consumers with higher trust in technology are more susceptible to the effect.

Several perspectives in psychology inform our prediction of why personalized recommendations might reduce preference clarity. First, research on social comparison (Festinger 1954; Moreau & Herd 2009) suggests that recognizing a recommender system that chooses well for the self might instigate an upward comparison with the system, which reduces confidence in decision making for the self. A second possibility arises from the research on learned helplessness (Abramson, Seligman, & Teasdale 1978), which propose that people confronted with their inability to influence a situation will internalize the lack of control. To the extent that personalized recommendations make choices that one should be making salient, consumers will feel greater loss of control, which will be diminish preference clarity. Finally, consumers might develop "transactive memory" (Wegner 1987; Sparrow, Liu, & Wegner 2011) with their partner, the

recommender system. In this view, the perception that the recommender system memorizes and stores one's preference may lead to a decrease in felt responsibility in remembering one's preference.

Study 1 ($N = 102$) examined whether consumers expect that personalized product recommendations will help them clarify and develop preference. Participants read a vignette on a consumer who had been using a music service. Whether this consumer has been relying on recommendations of songs that match her taste (personalized) or on recommendations of popular songs (others) had been manipulated between-subjects. Then participants rated the clarity in music preference that this hypothetical consumer seems to have (modified from Self-Concept Clarity scale in Campbell et al. 1996; e.g., "It will be difficult for Casey to make up her mind about which music to listen to because she doesn't really know what she wants"). It was revealed that consumers expect significantly higher preference clarity from a consumer that has been using personalized recommendations ($M\_personalized = 4.86$) than from a consumer that has been using non-personalized recommendations ($M\_others = 4.10$, $F(1,100) = 13.318$, $p < .001$).

Do personalized recommendations actually help consumers boost sense of preference clarity? To examine this question, Study 2 ($N = 157$) had participants listen to a series of contemporary pop songs and measured preference clarity. All participants first listened to three music clips and provided their evaluation of the clips (thumbs up, down, or neutral). Then, all participants were presented with another series of music clips. Participants were told that these clips were chosen either based on their feedback of previous songs (personalized), based on the preference of other listeners previously logged onto the service (others), or based on the random selection from the database (random). After listening to a series of these clips, participants completed the music preference clarity scale (e.g., "It is often difficult for me to make up my mind about which music to listen to because I don't really know what I want"). The preference unlearning hypothesis was confirmed, with personalized framing producing significantly lower sense of preference clarity ($M\_personalized = 4.13$) than the two non-personalized framings ($M\_others = 4.58$, $p < .05$; $M\_random = 4.63$, $p < .05$). Manipulation checks and confounding checks revealed that personalized framing yielded a greater perception that the service understands one's musical taste ($M\_personalized = 5.05$) than non-personalized framings ($M\_others = 3.84$, $p < .01$; $M\_random = 3.86$, $p < .01$) without influencing overall enjoyment with songs listened or general interest in music. The effect of recommendation framing on preference clarity was replicated with lab subjects in Study 2b ($N = 153$).

Who are more likely to fall prey of the preference unlearning effect? We expect that people with greater trust in technology will feel more comfortable delegating their decisions to technological agents and hence will perceive greater reduction in preference clarity after receiving personalized recommendations. Study 3 ($N = 218$) examined this possibility with a lab experiment. In addition to completing the music listening task and the preference clarity scale outlined in Study 2, participants rated the extent to which they trust technology in general (Parasuraman 2000). Results again revealed the main effect of recommendation framing on preference clarity ($M\_personalized = 4.01$ was lower than $M\_others = 4.43$, $p < .05$ or $M\_random = 4.32$, $p = .07$). Crucially, an interaction between recommendation-framing and trust-in-technology was found, $F(2,212) = 2.10$, $p = .054$. Specifically, consumers with higher (+1 SD) trust-in-technology predicted significantly lower preference clarity with personalized recommendations than with non-personalized recommendations (Others: $b = .87$, $p < .001$; Random: $b = .51$, $p < .05$). However, no such differences in predicted clarity was observed among consum-

ers with lower (-1 SD) trust-in-technology (Others: $b = .03$, $p = NS$; Random: $b = .15$, $p = NS$).

Taken together, these findings suggest that, as the recommender system learns the consumers' subjective preferences and makes choices for them, consumers feel less clear about their preferences (preference unlearning effect). The reduced preference clarity is consequential because it could lead to detrimental psychological outcomes such as low self-esteem or anxiety in decision making (Baumgardner 1990). This paper also adds to the literature on self-view confidence, which has shown that the confidence in self-related thoughts could be shaken by such experimental manipulation as writing about the self in one's nondominant hand (Gao, Wheeler, & Shiv 2008). This paper is first to our knowledge to show that a real-world consumer experience could shake confidence in self-view.

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The Essence Conveyed by Origins, Creators and Products: How Consumers Perceive Value

Chairs: Rashmi Adaval, University of Cincinnati, USA
Ravi Dhar, Yale University, USA

Paper #1: The Role of Origins and Essence in Heritage Branding
Nathanael Martin, University of Cincinnati, USA
T. Andrew Poehlman, Clemson University, USA
Noah VanBergen, University of Cincinnati, USA

Paper #2: How Solitude Helps Essence Retention and Increases Demand for a Creator's Product
Suhas Vijayakumar, Hong Kong University of Science and Technology, Hong Kong, SAR China
Wooyun Yang, Hong Kong University of Science and Technology, Hong Kong, SAR China
Rashmi Adaval, University of Cincinnati, USA

Paper #3: When Heritage Branding Limits Consumer Desire for Innovation
Rosanna K. Smith, University of Georgia, USA
Minju Han, Yale University, USA
George E. Newman, Yale University, USA
Ravi Dhar, Yale University, USA

Paper #4: Preserving Essence: The Mere Packaging Effect
Tim Doering, University of Michigan, USA
Katherine Burson, University of Michigan, USA
Andrew Gershoff, University of Texas at Austin, USA

SESSION OVERVIEW

Consumers today navigate an increasingly complex marketplace as sense-makers and meaning producers. Oftentimes they consume not the physical product, but the idea it embodies. As consumption has increasingly moved from the physical to the conceptual (Ariely and Norton 2009), purchasing a shoe, a bag, or art involves not just the acquisition of the physical product but also the acquisition of meaning, stories and expertise that make the product what it is.

This session views each marketable entity through the lens of psychological essentialism (Gelman 2004; 2013; Medin and Ortony 1989) and suggests that they all have an unobservable quality or an "essence" that differentiates them. Consumers, in their attempt to derive meaning, look for cues that help them discern this underlying "essence". Origin dates, characteristics of the creators, history and even packaging can offer cues about the underlying essence.

For example, the first paper examines the "essence" of "heritage brands". In this case, essence appears to be a function of not only the origin date (as is often assumed) but also other factors such as the continuity of the original creator's intent to the present day and era specific associations. Central to the thesis is the notion of continuity or essence transfer to the present times – a process that has implications for value.

Essence can also be cued through communications. The second paper examines how stories or communications about the creator's lifestyle and the creative process can lead to essence loss. Although an artist's essence is unobservable, consumers nevertheless perceive artists to have greater essence when they are depicted as embracing solitude as opposed to seeking social connections. Solitude preserves a creator's essence and its subsequent transfer to creative output increases perceived creative authenticity and demand for these goods.

Although retention of essence might serve the company well if consumers value it, in some instances, it might be constraining. The third paper examines situations in which a heritage brand's essence can come in the way of innovations. Given that heritage branding typically links a product's essence to the original intent of its creators, innovations or deviations from this intent violate this original essence, and lead to a perception that the product is not true to its origins and this can decrease perceived value for consumers.

To the extent that the retention of essence is desirable, the fourth paper points to a potential mechanism by which the essence of a good can be lost. Perceptually, essence is contained and held intact through a product's packaging. Such packaging provides a physical barrier that not only prevents contamination, but also psychologically prevents the leakage of a product's essence. The authors show how the absence of packaging can lead to loss of essence.

Collectively the four papers provide an understanding of how subtle cues inform consumers about the essence of a marketable entity and affect the perceived meaning, authenticity and value consumers derive from products.

The Role of Origins and Essence in Heritage Branding

EXTENDED ABSTRACT

What gives a heritage brand its claim to be so described? Indeed, little investigation has gone into how consumers make judgments of a brand's heritage— that is, the role that the brand's history has in defining the brand identity and image for the present and future (Urde, Greyser, and Balmer 2007). The current work is an attempt to understand how a *heritage brand* comes to be seen as such in consumers' minds by identifying the factors that give rise to judgments of heritage, as well as the effects that heritage have on consumer valuation.

Specifically, this work posits that the structure of a heritage brand is one in which the brand origins are continuously maintained into the current day, and that the brand's continuity over time occurs through a process known as psychological essentialism (Medin and Ortony 1989; Gelman 2003). Specifically, the current work posits that some aspect of a brand's beginning (such as a founder's intentions) cultivate an "essence" of the brand that persists, which in turn facilitates consumers' perceptions of a brand's heritage.

To date, empirical work on heritage brands has only used origin date to manipulate the perception that a brand is a *heritage brand*. As heritage branding involves origin and history, it was important for us to demonstrate that era-specific associations actually differ as a function of the brand's age. We found this was the case. Knowing nothing about a product other than the date of its production (2008, 1958, 1908, 1858, 1808, 1758) led consumers to view brands produced on or before 1908 as being likelier to be handmade, by an artisan, with expertise, and with pride ($F(5, 63) = 16.670, p = .001$). Yet, if age were the sole predictor of heritage, then we would expect no effect of heritage judgments to emerge in the absence of an age cue. A subsequent pilot test suggests this is not the case. Indeed, differences in judgments of a brand's heritage also emerges based on the product category in which it operates suggesting that individuals use associations unrelated to age as a basis for heritage judgments ($F(4.277, 45) = 19.061, p = <.001$). (The statistic reported is based on a repeated-measures ANOVA wherein the assumption of sphe-

ricity has been violated. Consequently, the reported statistic is the Greenhouse-Geisser correction.)

Building on the previous experiment, Study 2 sought to answer whether heritage judgments are based not just on *when* a brand began but also *how* it began. In other words, this study investigated the role of a brand's origin in establishing its heritage. Specifically, study 2A tested whether internal (e.g., adhering to the values and intent of the founder) versus external (e.g., adhering to the desires of the consumer) motivations affect heritage perceptions, and found evidence that when brand's adhere to internal motivations they are deemed more of a heritage brand than when they cater to consumer preferences. Consistent with our predictions, when the brand operated based on internal motivations, judgments of heritage were higher ($M = 5.66$, $SD = 1.122$) than when the brand's identity was externally formed ($M = 5.12$, $SD = 1.044$; $t(133) = 2.89$, $p = .004$).

With this split between origin date and other information surrounding brand origins in mind, Study 2B investigated whether emphasizing these 'internally-motivated' attributes for a company could overwhelm origin date associations. This is exactly what we found. When we emphasized a company's internal motivation, brands were seen as more of a *heritage brand*—irrespective of having been founded in 1908, 1958 or 2008—than an externally-motivated brand whose production was conducted of the same exact products at each company origin date ($F(1, 161) = 33.33$, $p < .001$; Cohen's $d = 0.78$).

Studies 1-2 are concerned with production at company origin and study 3 how product origins translate to the current day. But if psychological essence is a contributing component outside of affecting product perception, other manipulations of psychological essence should be powerful in attenuating a company's claim to heritage. As psychological essence is commonly viewed to transfer within families (Dar-Nimrod and Heine 2011; Keller 2005; Uhlmann, Zhu, Pizarro and Bloom 2012), we manipulated whether a family company had transferred ownership only within family or outside of it; and further whether ownership had been transferred only once or five times (holding time periods constant). Consistent with the idea that psychological essence transfer is key in judgments of heritage, family-owned companies were seen possessing equal heritage regardless of exchange frequency. However, one transfer outside the family was enough to attenuate heritage judgments and five transfers resulted in a larger drop ($F(1, 290) = 5.46$, $p = .029$).

In sum, we find that era-specific associations contribute to judgments of 'heritage' to the extent they signal origins. Further, when there is a disruption between company origin and present (in product or ownership), the brand experiences a detriment to its credence as a 'heritage brand'. This work confirms prior work showing that consumers readily distinguish between heritage and non-heritage brands as well as show consistent patterns in their judgments of heritage.

How Solitude Helps Essence Retention and Increases Demand for a Creator's Product

EXTENDED ABSTRACT

Artists and creators often communicate about their lives and the creative process through social and mainstream media. This information can affect consumers' perceptions of an artist's essence and the products they create.

According to Gelman (Gelman 2004; 2013; Medin and Ortony 1989), essence captures something fundamental that distinguishes an entity from others. An artist's essence captures an underlying structure of beliefs about how they create, and how their innate potential for creativity is expressed under optimal conditions. Although unobservable, consumers' views of this essence are nevertheless affected by how the artists are portrayed in the media. Specifically, artists are perceived to have greater essence when they embrace solitude in the process of creation, and people find their creations to be more authentic and desirable in this context.

Creativity could emerge through contact with others or in solitude. Given that social contact increases susceptibility to social expectations and obligations and increases feelings of self-inauthenticity (Wood et al. 2018; Baumeister 1987), consumers might assume that avoiding social contact (i.e., solitude) will increase artistic authenticity through a process of essence containment.

To elaborate: A solitary artist's creation will be perceived to contain more of the creator's essence because social contact (i.e., influence) leads to an attenuation of the original essence. Just as a brand's essence is perceived to get weaker the further the production is from the original factories (Newman and Dhar 2014), so also does the unique essence of the creator get attenuated in the presence of others because of the perceived social influence of non-original agents. Thus, the more solitary the artist, the greater the essence left intact for transfer to their creations and the greater the perceptions of creative authenticity and demand.

Two pretests tested the assumption that solitary (versus sociable) individuals retain more of their original essence. 119 participants who saw a picture of a male walking alone or alongside a woman perceived him as having more essence when he was alone ($M = 71\%$) than when he was not ($M = 62\%$), $F(1, 117) = 4.73$, $p = .03$. An additional 354 participants perceived a man to be less susceptible to social influence when he was described as seeking solitude ($M = 2.33$) than as sociable ($M = 4.88$), $F(1, 352) = 391.93$, $p < .01$. He also retained greater essence in the former condition (76%) than in the latter (60%), $F(1, 352) = 42.6$, $p < .01$. Perceived susceptibility to social influence fully mediated the effect of solitude on essence left intact (95% CI [4.02, 9.37]).

Experiment 1 examined if solitude helps retain a creator's essence and is then transferred to their creations. 147 participants read a biography of a painter described as being either solitary or sociable and then indicated how much of his original essence he had intact, rated two paintings by him, and indicated the extent to which his essence had transferred to these paintings (Smith, Newman, and Dhar 2016). The solitary artist had a greater amount of essence ($M = 5.57$) compared to the sociable artist ($M = 1.52$), $F(1,137) = 367.64$, $p < .01$ and was also believed to have transferred more of his essence to his paintings ($M = 6.22$) than the sociable one ($M = 5.35$), $F(1, 137) = 10.47$, $p < .01$. The amount of original essence left intact inside the artist fully mediated the relationship between the artist's social nature and essence transfer to the paintings (95% CI [.00, .81]).

Experiment 2 examined if this essence transfer affected consumers' purchase intent. 122 participants read an article about a perfumer described as either solitary or sociable and then indicated the perceived creative authenticity of his perfumes (Valsesia, Nunes, and Ordanini 2016), amount of essence transferred to his perfumes, and likelihood of purchasing his perfumes. Participants indicated a greater purchase likelihood for perfumes created by a solitary perfumer ($M = 5.03$) than by a sociable perfumer ($M = 4.52$), $F(1,116) = 4.17$, $p = .04$. This relationship was sequentially mediated by perceived amount of essence transferred to the perfume and creative authenticity of the perfume (95% CI [.01, .13]).

Experiment 3 ($N = 122$) was identical to Experiment 2 but with the addition of measures of perfumer's expertise and effort invested in the creation to rule out alternative explanations. Purchase intentions were higher when the creator sought solitude ($M = 6.07$) than social connections ($M = 5.54$), $F(1,120) = 3.28$, $p = .07$. Similarly, participants presumed greater essence transfer to the creation in the

former condition ($M = 6.78$) than in the latter ($M = 5.81$), $F(1,120)$ = 7.43, $p < .01$. Parallel mediation analysis revealed that perceived effort invested and expertise did not mediate the relationship. However, the essence transferred from the artist to the perfumes significantly mediated the relationship between the perfumer's desire for solitude and consumers' purchase intent (95% CI [.02, .27]).

Solitude could be sought voluntarily during the creative process or be an inherent personality trait. People typically seek solitude (i.e., it is self-chosen) whereas loneliness is a state imposed by others and, therefore, might have different effects. To evaluate these possibilities, some participants in Experiment 4 ($N = 351$) read a description of a perfumer as having a solitary, lonely, or sociable personality. Others read about the perfumer experiencing solitude, loneliness or social connections during the creative process. The interaction of the artist's nature and the focus of the description (personality vs. creative process) was marginally significant, $F(2, 345) = 2.485$, $p = .085$. Participants indicated greater purchase intentions when the creative process was solitary ($M = 6.36$) than when it was either lonely ($M = 5.45$; $F(1, 345) = 7.598$, $p < .01$) or sociable ($M = 5.68$; $F(1, 345) = 4.268$, $p = .04$). However, purchase intent did not vary with the artist's personality (5.62, 5.72, and 5.59, respectively; $p = .90$).

To summarize: Portraying creators as seeking solitude leads to perceptions that their creations are more likely to be imbued with their essence, and this increases purchase intent.

When Heritage Branding Limits Consumer Desire for Innovation

EXTENDED ABSTRACT

One way in which brands enhance product appeal is through *heritage branding*—wherein, a product's history or origin is made central to its identity. Although prior work has focused on the benefits of highlighting product history on consumer valuation (Wuestefeld et al. 2012) and on perceptions of the product's authenticity or degree of "brand essence" (Beverland et al. 2008; Grayson and Martinec 2004; Newman and Dhar 2014), this article explores a cost of heritage associations. For example, Converse's Chuck Taylors has benefited from its well-known history, with a design touted to have been unchanged for 100 years; at the same time, this positioning has made it challenging for the company to make desired improvements to the shoe.

Across six studies, we find that changes made to heritage-branded products, even those that functionally enhance the product, may decrease perceived value. Drawing on the design stance (Bloom 1996; Barrett, Laurence, and Margolis 2008), which asserts that people tend to define artifacts based on the perceived intentions behind their creation, in addition to work on the role of essentialist reasoning in authenticity judgments (Newman and Dhar 2014), we theorize that heritage branding leads consumers to define a product in relation to the original intentions behind its creation. In other words, heritage-branding ties a product's essence directly to that which was present at its origins. Enhancements often deviate from the product's original intent, leading consumers to view the product as no longer being true to its origins, and, as a result, less authentic. Thus, enhancements can actually decrease the perceived value of the product through lowering authenticity perceptions.

Study 1 provided initial evidence that enhancements can lower the value of heritage-branded products. Participants rated a set of high heritage-branded products (e.g., Campbell's Soup) or a matched set of low heritage-branded products (e.g., Progresso Soup). Those who evaluated the high heritage products were significantly less willing to try new and improved versions than those who evaluated low heritage products, $t(218)=4.31$, $p < .001$.

Study 2 then directly manipulated heritage branding and product enhancement. Participants viewed an ad for a burger restaurant with heritage branding manipulated by including or excluding indexical cues (e.g., est. date, lineage of founder, etc.) (Beverland et al. 2008; Grayson and Martinec 2004). Moreover, participants were randomly assigned to rate a burger that was either unchanged or enhanced from the original. As predicted, there was a significant interaction between heritage and enhancement on willingness to purchase the burger, $F(1, 360) = 10.23$, $p = .002$. When heritage branding was high, purchase intent was significantly more likely for the original than for the enhanced burger, $t(166) = 4.89$, $p = .03$. The pattern reversed when heritage branding was low, $t(193) = 5.47$, $p = .02$. Authenticity mediated this interaction [95% CI for indirect effect = -1.65 to -.58] but not perceptions of quality.

Study 3 sought to increase external validity by testing whether the effect of heritage branding obtains for consequential choices. Participants read a description of a music ensemble. The description either highlighted the ensemble's heritage (heritage condition) or not (control condition). Then, all participants were asked to choose between an original version of the ensemble's album or a remastered version of the same album. Participants were also informed that the study was incentive compatible in that a set of them would be randomly selected to actually receive the album they chose. Results revealed that participants were less likely to choose the remastered album (54.0%) when the heritage of the ensemble was highlighted compared to when it was not (67.3%), $\chi^2 (1, N = 400) = 7.40$, $p = .007$.

Study 4 ruled out a salient alternative explanation—the backlash to enhancement could be driven by the fact the original is seen as having "stood the test of time," and hence is rationally inferred to be of higher quality than the enhanced product. Between-subjects, we manipulated whether a heritage-branded jacket had existed for a relatively long (100 years) or short (10 years) amount of time. Participants expressed greater purchase interest for the original jacket than the enhanced jacket $F(1, 556) = 5.93$, $p = .015$, $d = .20$. Importantly, there was no significant two-way interaction of time and product, $F(1, 556) = .23$, $p = .63$, nor was there a main effect of time, $F(1, 556) = 1.99$, $p = .16$. This suggests that, holding heritage branding constant, whether the product has a short or a long history does not alter the negative effect of enhancement on product valuations. Replicating Study 2, the main effect of enhancement was mediated by perceptions of authenticity [Indirect effect = -.14, 95% CI = -.03 to .27].

Study 5 examined a boundary condition of the effect. Specifically, we reasoned that if consumers are primarily concerned with a product's utilitarian features, then participants should be less concerned with the product's authenticity, and hence, the negative effect of product enhancements should be attenuated. To test this, participants were told that they were interested in finding either an aesthetically-pleasing (hedonic goal) or a functional (utilitarian goal) chair, and evaluated either the original or enhanced version of it. As predicted, there was a significant interaction between the goal and enhancement, $F(1, 365) = 6.33$, $p = .012$. Although we replicated the negative effect of enhancement, $F(1,180) = 4.55$, $p = .03$, and mediation by perceptions of authenticity in hedonic goal condition [95% CI for indirect effect = -.93 to -.19], enhancement did not significantly alter product evaluation in the utilitarian goal condition, $F(1,185) = 1.99$, $p = .16$.

Finally, Study 6 tested whether the same effects manifest in hedonic experiences. Participants watched a clip from The Lion King

that was either described as a bonus scene, added after the original production, or as a deleted scene, made during the original production of the film. Participants rated the same clip less enjoyable when it was described as a bonus scene as opposed to a deleted scene, $F(1,154) = 7.22$, $p = .008$. This effect was again mediated by perceptions of authenticity [estimated indirect effect= -.35; 95% CI=-.72 to -.03].

Preserving Essence: The Mere Packaging Effect

EXTENDED ABSTRACT

Sustainability has become increasingly important for all stakeholders (Kumar, Rahman, Kazmi, and Goyal 2012), yet packaging constitutes almost one-third of US household waste (EPA 2015). In this research, we examine the psychological benefits of packaging that make it difficult to reduce in the marketplace.

Though packaging sometimes offers important functions (Kotler and Keller 2011), we examine if consumers prefer products that are packaged, even when it offers little to no functional benefits ("mere" packaging). Indeed, for the ten products we used, a pretest revealed that consumers do not believe packaging is necessary ($p < .01$). We hypothesize that packaging can be merely a psychological barrier. Psychologically, packaging can counteract negative product evaluations caused by contamination (Argo, Dahl, and Morales 2006). However, disgusting properties can infect even a properly packaged product (Morales and Fitzsimons 2007). Thus, concerns about contagion alone are not sufficient to explain the psychological benefits of mere packaging. Parallel to the contagion account, however, packaging might act as a barrier that prevents "essence" from escaping the product. Consumers imagine essence following the laws of physics—it can be depleted (Nemeroff and Rozin 2018)—and transferred even without physical touch (Morales, Dahl, and Argo 2018). Thus, reducing mere packaging might be impractical because consumers believe an unpackaged product's essence has escaped. We find support for this hypothesis in 4 experiments using products that a pretest confirmed did not require packaging.

Study 1: In two experiments designed to see if consumers favor products with mere packaging, 172 students (study 1a) and 141 students (study 1b) engaged in a hypothetical shopping scenario for a soccer ball (1a) or USB drive (1b). Participants were told to imagine that they examined the ball before making a purchase decision. In one condition, the hypothetical store carried both packaged and unpackaged balls. In two other conditions, however, participants were told that the store only carried packaged balls and that the package had to be removed to inspect the ball. This allowed us to detect a moderator of the preference for packaging. In one case, participants were told to imagine that they took the ball out of the packaging themselves while in the other, it was the salesperson that opened the packaging. In all conditions, participants indicated whether they would choose a packaged version of the product, the unpackaged version that was examined, or were indifferent. In study 1a, there was a significant relationship between condition and frequency that the packaged product was chosen, $\chi^2(4, 172) = 23.527$, $p < .001$. As predicted, consumers strongly preferred a merely packaged ball (79% vs. 16% unpackaged) when given a choice between the two. If the consumer or salesperson removed the packaging, the preference for a packaged product was significantly reduced. Only 44% preferred the packaged product (vs. 40% unpackaged) when the salesperson opened it and only 39% when they opened it themselves (vs. 41% unpackaged). Study 1b replicates the findings from study 1a. A significant relationship between conditions and frequency of the packaged product being chosen was revealed, $\chi^2(2, 141) = 33.927$, p

< .001. If the product was available packaged and unpackaged, participants chose the packaged option significantly more often than the unpackaged option (86% vs. 10%). The preference for a packaged item was greatly reduced if the packaging was opened at the point of purchase (42% vs. 38%). In sum, study 1 shows that consumers prefer merely packaged products over unpackaged ones. However, consumers are willing to choose unpackaged products significantly more often if they participate in removing the packaging at the point of purchase. We suspect that seeing the product opened at the point of purchase provides consumers with the reassurance that the essence has not escaped before. Study 2 explores this hypothesis.

Study 2: Study 2 explores if people perceive packaging as a way to prevent essence from leaving a product. Because consumers imagine that essence is like a depletable physical substance, we hypothesize that an unpackaged product will be perceived as less heavy compared to a packaged version. 193 participants engaged in 2 (between subjects; product in packaging vs. product next to packaging) x 8 (within subjects; product) mixed study design. All eight products were evaluated either in packaging or next to packaging. Across both between-subjects conditions, participants compared the value/weight of a product at hand and all of its packaging to an average version of the product and packaging on a 7-point scale (1, much less valuable than the average __ and packaging; 7, much more valuable than the average __ and packaging). As predicted, there was a significant difference between the two conditions for both weight ($F(1, 190) = 4.991$, $p < .05$) and value ($F(1, 190) = 4.087$, $p < .05$). Importantly, participants indicated that products and packaging are heavier and more valuable if the product was in the packaging ($M_{weight} = 4.65$; $M_{value} = 4.65$) compared to next to packaging ($M_{weight} = 4.37$; $M_{value} = 4.42$). A posttest ($n = 154$) revealed that products next to packaging are perceived as more contaminated ($p < .001$) but not lower quality ($p > .05$) or less safe ($p > .1$) compared to products inside packaging. Study 2 shows that mere packaging offers psychological benefits beyond protecting against (irrational) contagion. Participants believed that the unpackaged product with its packaging was lighter than when it was packaged, showing that essence is perceived as lost when packaging is removed and that this negatively impacts the value of the product in the consumer's eyes.

While contagion research explains the devaluation of products with the transfer of unwanted properties into a target product, we find that the transfer of something out of the product is also a critical driver of product valuation. Mere packaging serves as a bidirectional barrier, keeping an object's (positive) qualities inside while keeping the (negative) qualities of others out. By allowing consumers the opportunity to control unpackaging, we can reduce concerns about essence loss and possibly reduce the amount of nonfunctional packaging that ends up in landfills.

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New Wine in Old Glasses: Influencing Judgments Through Sound, Sight, and Semantics

Chair: Johann Melzner, New York University, USA

Paper #1: The Sound of Music: The Influence of Timbre on Product Perception

Johann Melzner, New York University, USA
Priya Raghubir, New York University, USA

Paper #2: Imagery of Change: Visual Outcomes Elicit Process Simulation and Promote Persuasiveness

Luca Cian, University of Virginia, USA
Chiara Longoni, Boston University, USA
Aradhna Krishna, University of Michigan, USA

Paper #3: Do Firm Cues Impact Product Perceptions?: When Small is Natural

Ana Scekic, HEC Paris, France
Aradhna Krishna, University of Michigan, USA

Paper #4: Perceptual Grounding of Quantity

Arnaud Monnier, Cornell University, USA
Manoj Thomas, Cornell University, USA

SESSION OVERVIEW

A century of accumulated wisdom has given us ways to communicate a product's experience and credence attributes through search attributes like brand name, price, and packaging. A typical ad or product information will include some combination of sound, sight, and semantics. In this session, we bring together nascent research that explores the following question from different angles, yet in a synergistic way: How do music (sound), pictures (sight), and verbal elements (semantics) in marketing communication influence both judgments of abstract notions, such as product personality, effectiveness or naturalness as well as perceptions of physical properties (e.g., quantity)? While this question is as old as marketing itself ("the old glasses"), this session combines four papers that uncover novel consumer associations and perceptual mechanisms ("the new wine").

The first paper focuses on sound, which has received very little attention in consumer research (e.g., Krishna and Schwarz 2014) despite its prevalence in the marketplace. Melzner and Raghubir show across nine studies that timbres (the unique sounds of instruments) trigger specific associations of ruggedness and sophistication that can influence product perceptions with consequences for purchase intentions and donation amounts. They further show that this spill-over effect is moderated by the ambiguity of *a priori* product associations.

The second paper investigates visual advertising techniques (sight) on ad persuasiveness. Cian, Longoni, and Krishna compare ads that visualize a desired transformation either via before/ after visuals (e.g., of a weight loss program) with ads that also include intermediate steps of progression. In seven studies they show that while progression ads are less prevalent, they facilitate mental simulation of the change process. This increased spontaneous generation of visual process imagery increases ad persuasiveness.

The last two papers examine semantics. Scekic and Krishna explore a novel association between the concepts of naturalness and size. In four studies they demonstrate the existence of a "small=natural" association. They show that consumers use descriptions of company size as a cue to infer product naturalness, suggesting that small companies can benefit from signaling their size, since consumers tend to prefer natural products (Rozin et al., 2004).

The last paper by Monnier and Thomas investigates verbal descriptions of size. In the context of online grocery shopping, they show in five studies that more versus less perceptual quantity de-

scriptors (e.g., 12 snack bags of cookies1 oz each versus 12 oz of cookies in snack bags, 1 oz each) lead to a greater focus on *hedonic satisfaction* with rather than *analytic evaluation* of quantity. Consistent with this account, they find that retailers charge higher per unit prices and consumers evaluate prices more favorably when quantity information is framed more perceptually.

Together, these papers hone in on understanding how sound, sight, and semantics can affect product perceptions, ad persuasiveness, consumer inferences, and price evaluations. This session should be of interest to a broad audience of researchers with substantive interests in retailing and advertising as well as a theoretical interest in information processing and integration. The consequential nature of the dependent variables provides insights for practitioners.

The Sound of Music:
The Influence of Timbre on Product Perception

EXTENDED ABSTRACT

Does the distinctive sound of an instrument trigger specific associations and can these in turn affect product perceptions? Despite the omnipresence of music in the marketplace, research on musical features in marketing is relatively scarce. The present research focuses on *timbre*, the feature that determines "what music sounds like." Timbre denotes features of auditory sensation that enable a listener to tell two sounds apart even when loudness, pitch, and duration are held constant. Timbre is an ecologically relevant cue allowing humans to differentiate between literally hundreds of voices, and instruments, regardless of musical proficiency.

Studies 1-3 examine pure associations with timbre. Study 1 finds that the e-guitar and the violin are associated with ruggedness and sophistication when presented in isolation (Study 1). Study 2 showed that while the mere name of the instrument led to the same pattern, it was exacerbated when the sound was presented instead. Study 3 show that the e-guitar and violin timbre do not trigger these associations due to their prototypicality for the rock and classic genre respectively, but rather that timbre is a significant contributor to genre specific associations.

Studies 4A-D demonstrates that associations triggered by timbre affect product perception, especially when the *a priori* associations with a product are ambiguous. The ambiguity is resolved by perceiving the product in accordance with timbre associations. However, when there is an *a priori* dominant association, congruent timbre can enhance the dominant association, while incongruent associations leave product perceptions largely unaffected. Studies 5-6 investigate downstream consequences.

Study 1 (N=99). Participants heard a tone played by a violin, e-guitar, or an artificial sine wave and rated how strongly they associated the sound with the five dimensions of brand personality (Aaker 1997). A 3(timbre: e-guitar, violin, sine) x 5(association: competence, excitement, ruggedness, sincerity, and sophistication) mixed-design ANOVA revealed an interaction, $F(6.86, 329.33)=32.13$, $p<.001$. While there were no strong associations with the sine wave, the e-guitar (violin) was most strongly associated with ruggedness (sophistication), ps<.001.

Study 2 (N =76). Students heard either the sound or saw the name of a violin or e-guitar and indicated their associations. A 2(instrument) x 2(information: timbre/name) x 2(association: ruggedness/sophistication) mixed-design ANOVA revealed a three-way

interaction, $F(1,72)=10.82$, $p=.002$. Violins were more strongly associated with sophistication than ruggedness, with the reverse for e-guitars ($ps<.001$), but the effects were stronger when the sound was heard (versus name shown).

Study 3 ($N=327$). Participants heard an excerpt of a well-known classical or rock genre piece either arranged for violins, e-guitars or sine waves. A 3(timbre: e-guitar, violin, sine) x 2(song: Classical--Beethoven's-5th, Rock--Smoke-on-the-water) x 2(association: ruggedness, sophistication) mixed-design ANOVA revealed the predicted three-way interaction, $F(2, 321)=5.20$, $p=.006$. When presented with the sine wave, the rock (classical) piece was perceived as more rugged (sophisticated), $ps<.001$, reflecting pure genre associations. Presenting the piece with genre congruent timbre increased respective dominant associations (ruggedness-rock; sophistication-classical) compared to presentation with the sine tone, $ps<.001$. However, presenting the piece with genre incongruent timbre (rock-violins, classical-e-guitars) significantly increased timbre specific associations, $p<.001$, such that for instance Beethoven's-5th was perceived as more rugged than sophisticated when performed using the e-guitar.

Studies 4A-D ($N_{Total=}646$): In all studies participants heard a violin/ e-guitar or no sound in a short product video and judged a product's level of ruggedness and sophistication. There was a sound-association interaction in Studies A-C ($F(2, 73)=4.02$, $p=.022$; $F(1, 63)=12.66$, $p<.001$; $F(2, 88)=2.72$, $p=.072$, A-C respectively). When a priori associations of ruggedness and sophistication were the same (perfume: 4A, control condition, $p=.333$), participants perceived the product as more rugged versus sophisticated when presented with the sound of an e-guitar, $p=.001$, and the reverse was true when it was presented with a violin, $p=.049$. When the product was perceived as more rugged (sophisticated), in the no sound condition (t-shirt: 3B, bathrobe: 3C; $ps<.001$), the product was perceived as even more rugged (sophisticated) when presented with an e-guitar (violin) sound, $p=.016$ ($p=.092$). Incongruent timbre did not affect product perceptions as compared to the control condition. Study 4D successfully replicated the results of studies 3A and B in a single design: A 2(timbre: e-guitar, violin) x 2(product: perfume, t-shirt) x 2(association: ruggedness, sophistication) mixed-design ANOVA revealed a three-way interaction, $F(1, 395)=7.17$, $p=.008$. The perfume was perceived as more rugged (sophisticated) than sophisticated (rugged) when presented with an e-guitar, $p<.001$ (violin, $p<.001$), replicating Study 4A. The t-shirt (a priori more rugged) was perceived as more rugged than sophisticated when presented with an e-guitar ($p<.001$), and this pattern persisted but was attenuated when it was presented with a violin ($p=.011$), replicating Study 4B.

Study 5 ($N=390$) investigated downstream consequences. Participants were asked to imagine that they needed a new t-shirt to wear either to a fashionable fundraiser or an outdoorsy hiking trip and saw a video of the t-shirt with either the sound of a violin or e-guitar. 2(timbre: e-guitar/violin) x 2(scenario: fancy/outdoorsy) ANOVAs revealed the predicted interaction for purchase intention, $F(1,386)=6.72$, $p=.010$. Participants in the e-guitar condition indicated higher purchase intentions (similar patterns for evaluation and PWP) when presented with the outdoorsy versus fancy scenario, $p=.018$. Similar directional effects were obtained for the violin condition.

Study 6 ($N=193$): Participants saw a video of one of two charities pretested to be higher in sophistication (Museums) or ruggedness (National Parks) alongside a melody played by either a violin or e-guitar and given the choice to donate part of their participation payment. A 2(NGO) x 2(Timbre) between-subjects ANOVA on donation amount contingent on donating revealed a significant cross-over interaction, $F(1, 118)=4.39$, $p=.036$. Participants donated more to the Museums when a violin played, $p=.019$, though there was no difference in donations to the Parks. Likelihood of donating did not differ. Future research will examine the potential moderating effect of *a priori* preference (higher for Parks) in explaining these results.

Together, these studies shed light on a neglected musical design feature that can be strategically used in marketing communication in order to affect consumer perceptions. Our findings advance research in musicology by suggesting timbre as a strong driver of genre associations.

Imagery of Change: Visual Outcomes Elicit Process Simulation and Promote Persuasiveness

EXTENDED ABSTRACT

Humans often desire change: we want to be thinner, look younger, have more hair. Marketers respond to such desires by offering products promising to deliver the corresponding changes: weight-loss programs, wrinkle removers, hair regrowth solutions. The visuals in the advertisements (ads) for these products typically focus on the desired final outcome by featuring a before and an after visual (e.g., a person at the beginning and at the end of a weight loss program; *before-after ads*). Very few change-ads include visuals of the intermediate steps between the before and the highly desirable after (e.g., a person gradually slimming down throughout the weight loss program; *progression ads*).

Although neglected in the marketplace and by future marketers, across seven studies we show that progression ads are superior to before-after ads across multiple consumer domains. We theorize that, to be effective, ads promising transformation should facilitate mental imagery of the trajectory of the change, i.e., the consumer should be able to imagine herself going through the transformation from "before" to "after." Progression ads (but not before-after ads) evoke this kind of spontaneous *process imagery*: thoughts and images about the means and ways leading to a change. In turn, spontaneous process imagery increases the persuasiveness of the ad.

A content analysis of 250 ads of the top five weight-loss programs in the US showed that before-after ads are more common than progression ads: 36% were "before-after" whereas only 0.8% were "progression." Another pilot study asked participants (N=122) to draw the ad for a weight loss program. Whereas 22.95% of participants drew before-after ads, only 1.64% drew progression ads ($p < .001$; remaining ads coded as "others"). Overall, these pilot studies showed that progression ads are neglected by both current and future marketers.

Studies 1 and 2 test for the predicted ad-type effect: ad-type impacts real choice between products (study 1) and ad persuasiveness (study 2). Studies 3-5 focus on our process imagery explanation for this effect: progression ads evoke more process imagery than before-after ads (study 3); process imagery mediates the ad-type effect (studies 4-5); externally inducing process imagery attenuates the ad-type effect (study 6). Study 7 shows under which conditions utilizing progression ads may backfire. We also test alternative explanations for the ad-type effect: perceived effort in study 4 and amount of information in study 5.

Study 1 ($N=131$). In an incentive-compatible setting, students chose a free sample of a teeth whitening treatment promoted either by a before-after or by a progression ad. Whereas 67.2% of students chose the sample promoted by the progression ads, only 32.8% chose the sample promoted by the before-after ad ($p <.01$).

Study 2 ($N=158$). Participants rated the persuasiveness of one two ads (before-after vs. progression) for a hair growth product. The

progression ad was more persuasive than the before-after ad ($p < .05$).

Study 3 ($N =143$). Using a verbal protocol, we coded the content of the spontaneous thoughts and images elicited by either a before-after or a progression ad. The progression ad generated more spontaneous process imagery than the before-after ad ($p < .01$). The two ads did not differ on outcome imagery ($p > .5$) or amount of imagery (i.e., response length, $p > .5$).

Study 4 ($N =110$). In another field study, participants rated the extent to which a before-after ad or a progression ad evoked process and outcome imagery (through six randomly presented statements, three reflecting process imagery and three reflecting outcome imagery). Again, the progression ad led to higher process imagery than the before-after ad ($p < .01$), which mediated the effect on ad persuasiveness (95% CI = .17 to .75).

Study 5 ($N =213$). One might argue that progression ads have a greater amount of information (more visuals), which renders them more persuasive than before-after ads. To test this alternative explanation, we created three versions of an ad for a weight loss program. The before-after ad included two visuals, the progression ad included six visuals, and a third, information-rich ad included three pairs of before-after visuals of three different people. The information-rich ad contained the same number of visuals as the progression ad (six). The progression ad was more persuasive than both the before-after ad and the information-rich ad (all p's < .05). Thus, process imagery (facilitated by a progression ad) and not amount of information led to greater persuasiveness.

Study 6 and 7 focus on boundary conditions. In study 6 ($N=186$), we reasoned that if spontaneous process imagery drives greater persuasiveness of progression (vs. before-after) ads, such effect should be eliminated if mental simulation of process is externally induced. Indeed, externally inducing process imagery (i.e., asking people to engage in mental simulation) attenuated the ad-type effect on persuasiveness, indicating a moderated mediation (95% CI = -.83 to -.05).

Study 7 ($N =412$) showed under what conditions utilizing progression ads may backfire: in domains where achieving the desired results quickly is both possible and made salient (e.g., nasal spray), a before-after ad was more persuasive than a progression ad ($p < .05$).

In testing our hypotheses, we used multiple product categories: a teeth-whitening treatment (study 1); a hair growth treatment (study 2); a weight-loss program with male models (study 3); a weight loss program with female models (studies 4-6); and a decongestant nasal spray (study 7). In all studies, pretest ensured that the stimuli did not differ on visual appearance, informativeness, and complexity (all p's > .1).

Theoretically, and differently from prior research on mental simulation, we bring attention to an understudied yet important typology of mental imagery: spontaneous mental simulation of process (*process imagery*), and highlight its critical role in the persuasiveness of advertised change. Second, we add to the literature on process versus outcome focus by showing how process imagery can be spontaneously generated through outcome visuals. Substantively, we show that before-after ads, currently prevalent in the market place, may be an ineffective way to credibly promise positive change.

Do Firm Cues Impact Product Perceptions?: When Small is Natural

EXTENDED ABSTRACT

Much research has connected product cues with product perceptions. Yet, research investigating the relationship between firm cues and product perceptions is limited. We study whether intrinsic firm characteristics influence product attribute perceptions – specifically, whether firm size influences perception of product naturalness. This question is relevant, given a climate of frequent mergers and acquisitions, which make firms bigger and their size salient, and considering consumers' preference for natural products (Rozin et al. 2004).

Research on naturalness has found the contagion principle (e.g., Rozin and Nemeroff 1990) greatly responsible for the perception of naturalness loss: mixing a natural entity with another (natural or not) entity was shown to "contaminate" and "denaturalize" it (Rozin 2005). Furthermore, the "processing history" of an entity was shown to have a higher impact on its perceived naturalness, than its "ingredients". This suggests that two seemingly identical products could be perceived differently on "naturalness", due to inferences regarding the type and quantity of processing they have gone through – hence, the environment (i.e., firm) in which, and by which, the products are processed matters.

Human intervention deprives natural entities of their essence, contaminating them with the essence of humans, machines and chemicals (Rozin et al. 2004). Thus, the more humans and machines an object comes in contact with, the less natural it will be. As such, we suggest that products from larger firms could be considered more likely to be "contaminated", leading to a "smaller firm = more natural product" intuition. We believe this intuition is scaffolded on an implicit association of the broader concepts of size and naturalness (i.e., "small = natural"): indeed, one could argue that living organisms are closest to their completely pure and natural form when they are "born" (i.e., small), since as they grow, they are more likely to change and be "contaminated" by the environment and contact with other entities. We tested these predictions in four studies.

Study 1 ($N=182$) tested the association of firm size and perceived product naturalness, and the persistence of this association (by manipulating awareness). In a 2("small" vs. "large" firm) x 2("aware" vs. "unaware" of association), between-subject, lab study, participants were presented a set of towels, and provided a towel swatch. In the "small" ("large") firm condition participants read the towels were produced by a "small company of 20 employees" ("large company of 20000 employees"). In the "aware" condition, instructions stated we were studying the impact of company size on perceived naturalness. Participants indicated the percentages of organically and conventionally grown cotton they believed the towels contained, using a 2-item constant sum scale (total 100%). Organic cotton percentage was our dependent variable. A manipulation check confirmed organic cotton was perceived as more natural ($M_{organic}=5.24$ vs. $M_{conventional}=3.65$; $p<.01$). Results showed a main effect of firm size on perceived naturalness ($M_{small}=44.07\%$ vs. $M_{large}=32.27\%$; $F(1, 178)=17.82$, $p<.01$), but no effect of awareness, nor their interaction ($ps>.30$). This revealed an association between firm size and perceived naturalness, even when participants interact with same haptic stimuli across conditions, and whether attention is drawn to the association or not.

In study 2 ($N=134$) we manipulated firm size in a less explicit way. We asked MTurk participants to evaluate a soap, and manipulated firm size as in study 1 ("company of 20 employees" vs. "company of 20000 employees") – however, we did not define the firm "small" or "large". Participants indicated perceived percentages of "natural" vs. "artificial" soap ingredients. A manipulation check showed the firm was perceived as smaller in the "small" condition ($M_{small}=2.22$ vs. $M_{large}=4.85$; $p<.01$). Results showed an effect of firm size on perceived naturalness ($M_{small}=61.82\%$ vs. $M_{large}=49.33\%$; $F(1, 132)=8.13$, $p<.01$), providing further evidence for the "smaller firm = more natural product" intuition.

In study 3 (*N*=221) we tested the effect of firm size on perceived naturalness when a signal of naturalness was on the packaging. In a 2("small" vs. "large" firm) x 2("organic label" vs. "no organic label" on package), between-subject, lab study, participants evaluated a yogurt on a 7-point scale (1="Completely artificial", 7="Completely natural"). We manipulated firm size as in study 1. Results showed a main effect of firm size (M_{small}=4.21 vs. M_{large}=3.79; $F(1, 217)$=6.20, $p<.02$), and label presence ($M_{organic\_label}$=4.38 vs. $M_{no\_organic\_label}$=3.62; $F(1, 217)$=20.48, $p<.01$) on perceived naturalness. Their interaction was not significant ($p>.70$). Planned contrasts suggested the firm size effect was stronger in the "no organic label" (M_{small}=3.86 vs. M_{large}=3.38; $p<.05$) than the "organic label" condition (M_{small}=4.56 vs. M_{large}=4.20; $p>.10$). Study 3 provides further evidence for the firm size impact on perceived naturalness, and shows that this effect weakens in presence of other naturalness cues.

In study 4 (*N*=113), we used the implicit association test (IAT) procedure to investigate whether people implicitly associate concepts of size and naturalness such that "small = natural" ("big = artificial"). Four words were used for the "natural" (*organic, herbal, raw, unprocessed*), "artificial" (*synthetic, plastic, fabricated, processed*), "small" (*little, tiny, micro, smaller*), and "big" (*huge, large, giant, bigger*) categories. Following standard IAT procedure (e.g., Greenwald et al. 2003; Cian et al. 2015), participants were presented with seven blocks: five practice and two main blocks. In the "*congruent*" main block, participants assigned words to the "*natural or small*", or "*artificial or big*" categories. In the second, "*incongruent*" block, the categories were paired in the opposite way (i.e., "*artificial or small*", "*natural or big*"). As per IAT assumptions, we expected categorization to be faster in the congruent block. Results showed the overall IAT effect was significant and response times were shorter in the congruent block (M_{Dscore}=0.204, t(112)=5.36, p<.01; $M_{congruent}$=1039.95ms vs. $M_{incongruent}$=1125.02ms), providing evidence for the "small = natural" implicit association. We suggest this association contributes to the "smaller firm = more natural products" intuition.

We provide evidence for the "smaller firm = more natural product" intuition, suggesting that small firms could benefit from signaling their size to consumers when competing with larger firms. Furthermore, when undergoing mergers and acquisitions, firms should consider the possible impact on consumers' perception of their products – once acquired by large firms, small firms' products might suffer from a perception of "denaturalization".

Perceptual Grounding of Quantity

EXTENDED ABSTRACT

Online grocery shopping is growing at a fast pace. Because of the sensory distance between shoppers and products, online shoppers have to rely on textual descriptions of products provided by retailers to make sense of quantity. Retailers can use more perceptual description of quantities (e.g., "12 snack bags of cookies, 1 oz each") or less perceptual descriptions (e.g., "12 oz of cookies in snack bags, 1 oz each"). In this research, we examine how different types of textual descriptions—more perceptual descriptions versus less perceptual descriptions—influence consumers' value perceptions. Our conceptualization is based on the literature on mental imagery. The literature on mental imagery and concreteness (MacInnis and Price 1987, Paivio 1990) has shown that mental imagery can affect moral judgments (Amit and Greene 2012), perceived likelihood of future events (Sherman et al. 1985), persuasion (Green and Brock 2000), preferences (Steinmetz, Tausen, and Risen 2018), product attractiveness (Adaval and Wyer 1998), anticipated satisfaction (Shiv and Huber 2000), willingness to pay (Bushong et al. 2010) and consumer choice (Huyghe et al. 2017).

Based on this stream of research, we propose that mathematical units (ounces, pounds, etc.) are less perceptual than natural units (pieces, bags, etc.). Furthermore, we propose that product descriptions with more perceptual descriptions of quantity leads i) retailers to charge higher price per unit, and ii) consumers to make more favorable price judgments.

Study 1: Amazon publishes on its website the top 100 bestsellers per category. To test our first prediction, in study 1 we coded the top 100 bestsellers of five categories with products that contains either natural or mathematical unit of quantity (total of 474 observations when removing products with missing information). We found a significant main effect of unit type on price per unit (log), $F(1, 461)$ = 12.85, $p <.001$, such that price per unit is higher for products with quantity expressed in natural (vs mathematical) unit.

Study 2. In study 2 ($N = 217$), we manipulated between subjects whether quantity is communicated in a more or less perceptual manner, with two replicates within subjects (i.e., potato chips and cookies). Participants were given the verbal description as well as the price of each product and asked to rate price attractiveness on a seven-point scale. For instance, for the chips replicate participants in the natural unit condition read "Snack size bags of potato chips, 12 bags (12 bags of 1 oz each)" while participants in the mathematical unit condition read "Snack size bags of potato chips, 12 oz (12 bags of 1 oz each)". We also measured our mediator, satisfaction with quantity ("How satisfied are you with the quantity offered for this price?", on a five-point scale. We found a main effect of the type of quantity description, $F(1, 215) = 12.03$, $p <.001$, such that price attractiveness was significantly higher in the more perceptual condition ($M = 4.22$) than in the less perceptual condition ($M = 3.60$). In addition, we found that the effect was mediated by satisfaction with quantity.

Study 3. In study 3 ($N = 296$), we show that the effect of mental imagery is moderated by construal mindset. We first measured participants' natural construal mind-set before they responded to the study (BIF, Vallacher and Wegner 1989) in a supposedly unrelated task. Because individuals in a low level of construal tend to pay more attention to concrete details and rely on mental imagery (Amit and Green 2012; Fujita et al. 2006; Tsai and Thomas 2011), we conceptualize that ease of mental visualization matters more for individuals in concrete construal mindset. Accordingly, we found significant effects of type of quantity description, $b = .79$, p <.001, construal mindset, $b = .03$, $p <.01$, and a significant interaction between quantity framing and construal mindset, $b = -.03$, $p <.05$. The effect of perceptual quantity description is stronger for people with a low construal mindset ($M – 3SD$), $b = 1.28$, $p <.001$, but is attenuated for individuals with a high construal mindset ($M + 3SD$), $b = .29$, $p =.15$. A test of the moderated mediation model (model 7) showed that the interactive effect of construal level and quantity description is mediated by satisfaction with quantity.

Study 4. In study 4 ($N = 152$), we tested moderation by brand attitude. We suggest that more natural units render quantity easier to visualize, which in turn makes quantity judgments more hedonic (vs analytical) in nature. If this is the case, the positive effect of natural unit on price attractiveness should be attenuated when prior brand attitude is negative. Using six real brands with unit type and replicate manipulated within subjects, we found significant effects of unit type, $b = .15$, $p <.02$, brand liking, $b = .25$, $p <.001$, and a significant interaction, $b = .09$, $p <.04$. The effect of perceptual quantity description on price evaluation was significant when brand liking is high (*M*

+ 1*SD*), *b* = .27, *p* <.002, but not when brand liking is low (*M* - 1*SD*), *b* = .02, *p* =.79.

Study 5. Lastly, if the effect of natural units is driven by greater reliance on hedonic (versus analytical) quantity evaluations, price judgments should be less sensitive to scope (Hsee and Rottenstreich 2004). In this study we used a completely within-subjects design (*N* = 108), wherein each participant evaluated 32 prices (16 products twice, each in both natural unit and mathematical unit conditions). We found significant effects of quantity description, *b* = 1.04, *p* <.001, quantity magnitude (log), *b* = .40, *p* <.001, and a significant interaction, *b* = -.32, *p* = .001, such that natural units improved price attractiveness when quantity magnitude was low (*M* - 1*SD*), *M* more perceptual = 4.72, *M* less perceptual = 4.16, *p* <.001, but not when quantity magnitude was high (*M* + 1*SD*), *M* more perceptual = 4.85, *M* less perceptual = 4.77, *p* =.19.

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Time Matters: Dynamics of Sequential and Simultaneous Multiple Goal Pursuit

Chair: Sarah Memmi, Duke University, USA

Paper #1: Budgeting Time First Increases Multiple Goal Achievement

Sarah A. Memmi, Duke University, USA
Jordan Etkin, Duke University, USA

Paper #2: Planning for Multiple Shopping Goals in the Marketplace

Jacob Suher, Portland State University, USA
Szu-chi Huang, Stanford University, USA
Leonard Lee, National University of Singapore, Singapore

Paper #3: The Better Path Not Taken: Goal-Setting Undermines Opportunity Cost Consideration

Liz Friedman, Yale University, USA
Minju Han, Yale University, USA
Guy Voichek, Yale University, USA
Ravi Dhar, Yale University, USA

Paper #4: A Multi-Goal Approach to Food Consumption: How Food Restrictions Affect Social-Relationship Goals

Kaitlin Woolley, Cornell University, USA
Ayelet Fishbach, University of Chicago, USA
Michelle Wang, Cornell University, USA

SESSION OVERVIEW

Multiple goal pursuit is a regular feature of consumers' everyday lives. Over the course of a single day, a consumer might pursue multiple goals for work, family, and personal interests. Within a single consumption occasion, such as a meal, a consumer might pursue multiple goals for health, social connection, and enjoyment. Compared to the pursuit of a single, focal goal, multiple goal pursuit is more complex (Orehek and Vazeou-Nieuwenhuis 2013; Weingarten, Bhatia, and Mellers 2018) and requires a different set of decisions (Dhar and Simonson 1999; Fishbach and Dhar 2005).

One critical factor in multiple goal pursuit is time. Goal pursuit unfolds over time and is constrained by time (Etkin 2019). When goals are pursued sequentially, consumers must determine how to allocate their time and how to manage motivation over time and across multiple goals (Huang et al. 2015; Fernbach, Kan, and Lynch 2015). Simultaneous goal pursuit (i.e., single actions that satisfy multiple goals) makes efficient use of time, but also imposes constraints that can create conflict between goals (Köpetz et al. 2011; Srna, Schrift, and Zauberman 2017). While emerging research highlights the interplay between time and goal pursuit, many open questions remain. This session offers new wisdom on the complex relationship between multiple goals and time.

Four papers examine the dynamics of sequential and simultaneous multiple goal pursuit. The first two papers investigate sequential goal pursuit, focusing on the effects of planning. First, **Memmi and Etkin** examine how time budgeting influences multiple goal achievement. Four studies find that budgeting time before setting multiple goals encourages consumers to calibrate goals to available time and, consequently, increases multiple goal achievement. **Suher, Huang, and Lee** investigate how planning for multiple goals affects motivation throughout grocery shopping trips. Five shopper tracking studies demonstrate that planning for multiple subgoals (i.e., creating a shopping list) produces a monotonic reduction in motivation over time, whereas consumers who don't plan purchases demonstrate a nonmonotonic "stuck in-the-middle" motivational pattern.

The second two papers focus on simultaneous multiple goal pursuit and the tradeoffs this strategy can entail. **Friedman, Han, Voichek, and Dhar** examine situations in which setting a specific goal (e.g., donate a certain amount to a charity) can conflict with a higher-order goal (e.g., maximize effectiveness of donations). Five studies demonstrate that specific goals reduce attention to and valuation of outside options, decreasing the likelihood of switching to superior alternatives (i.e., more effective means). **Finally, Woolley, Fishbach, and Wang** focus on conflict that evolves from the simultaneous pursuit of health and social goals when eating. Six studies, including large-scale surveys and controlled experiments, show that a goal to manage food restrictions can interfere with social-relationship goals by causing people to feel lonelier.

Together, these papers shed new light on processes of sequential and simultaneous multiple goal pursuit. The findings point to unique challenges consumers face when pursuing multiple objectives and identify some strategies to increase success. This session should have broad appeal to scholars interested in goal pursuit, motivation, time, consumer well-being, and the connections between them.

Budgeting Time First Increases Multiple Goal Achievement

EXTENDED ABSTRACT

Consumers have only 24 hours a day to pursue their multiple goals. When time is effectively allocated across multiple goals, consumers achieve their objectives. But when time and goals are misaligned, goal failure ensues. On a workday, that last email gets sent, but family dinner is missed. On a weekend, the grocery shopping gets done, but a workout is cut short. Such goal failures produce undesirable outcomes, including negative affect, reduced motivation, and goal disengagement (Brunstein 1993; Jones et al. 2009; Smiley et al. 2016; Soman and Cheema 2004; Weingarten, Bhatia, and Mellers 2018).

Several factors contribute to goal-time misalignment. Consumers underestimate time requirements (Buehler, Griffin, and Ross 1994) and overestimate future time slack (Zauberman and Lynch 2005). People underuse deadlines (Ariely and Wertenbroch 2002) and overspend time on proximal goals (Jhang and Lynch 2015). Such biases are especially problematic for multiple goals, as errors compound over sequential goal pursuit (Fernbach, Kan, and Lynch 2015).

How, then, can consumers better marshal their time to achieve multiple goals? In this research, we propose that a subtle shift in how people think about their goals in relationship to time—namely, adopting a "time-first" mindset—can improve multiple goal achievement. Specifically, we predict that budgeting time before setting multiple goals (vs. not budgeting time or budgeting time after goal-setting) encourages consumers to better calibrate goals to available time (i.e., to set goals that can be achieved within the time available to pursue them). Consequently, we predict that putting time first will increase multiple goal achievement.

Four experiments test these predictions. Each followed a similar procedure. Participants were given a total amount of time to pursue multiple tasks and asked to set goals for each. Goal-setting was incentivized (through bonus pay) such that people should aim to set high, but achievable, goals on each task. They were randomly assigned to one of two conditions: time-first or control. In the time-first

condition, participants budgeted time to each task before setting a goal, whereas in the control condition, participants simply set goals. We measured what goals people set, rates of multiple goal achievement, and the discrepancy or difference between set goal levels and actual output (i.e., number of correct answers on each task).

In experiment 1 ($N = 150$), participants were given 7 total minutes to spend on three tasks (geography, spelling, and math quizzes). As predicted, budgeting time first improved goal-setting. Compared to the control, participants in the time-first condition set lower goals ($p = .002$) that they were more likely to achieve (total number of goals achieved: $p = .002$; likelihood of achieving all three goals: $p = .012$). Supporting our theory, this occurred because participants calibrated their goals based on the time available to pursue them. On average, all participants underperformed their goals (i.e., goals exceeded actual output, which did not differ across condition). But importantly, this discrepancy was significantly smaller in the time-first (vs. control) condition ($p = .001$). Thus, participants who budgeted time first still set challenging goals (i.e., goals that exceeded output), and motivating goals (i.e., goals that produced a comparable level of output), but were more achievable within the time available.

Experiment 2 ($N = 300$) tests an alternative explanation based on budgeting per se. The design replicated study 1, with the addition of a goals-first condition in which participants budgeted time across tasks *after* setting goals. Consistent with prior results, the time-first (vs. control) manipulation led to lower goals ($M_{control} = 69.35$ vs. $M_{time-first} = 56.63$, $p = .013$) and increased multiple goal achievement ($M_{control} = 1.92$ vs. $M_{time-first} = 2.32$, $p = .012$), without reducing overall output ($M_{control} = 52.23$ vs. $M_{time-first} = 50.96$, $p = .687$). Importantly, the goals-first condition did not differ from the control (p's > .40). Supporting our theory, rather than merely planning how to spend time, putting time first benefits multiple goal achievement by calibrating goals in relation to time. A follow-up study showed that consumers who budget time after goal setting are unlikely to subsequently recalibrate goals, underscoring that time budgeting must occur before goal setting to boost multiple goal achievement.

Experiment 3 ($N = 280$) tests whether the effect is robust to assigned time budgeting. The design was the same as in experiment 1, except that participants in the time-first condition were all assigned to spend 3 (of the total 9) minutes on each task. Even when participants could not budget time based on individual preferences, setting goals in relation to time still encouraged lower goals ($M_{control} = 76.80$ vs. $M_{time-first} = 59.07$, $p < .001$) and increased multiple goal achievement ($M_{control} = 1.76$ vs. $M_{time-first} = 2.07$, $p = .020$), without reducing overall output ($M_{control} = 51.42$ vs. $M_{time-first} = 50.48$, $p = .685$).

In experiment 4, we generalize to a consumer-relevant paradigm—a shopping spree. Lab participants ($N = 103$) set goals for how many real products (maximum $10/product) to shop for on Amazon.com and Target.com over a total of 7 minutes. Consistent with prior results, participants in the time-first condition set lower goals set ($p = .003$), were more likely to achieve both shopping goals ($p < .001$), and showed less goal-output discrepancy ($p = .001$), without reducing overall output (i.e., products selected; $p = 638$). Underscoring our theorizing regarding better calibrated (vs. generally lower) goals, budgeting more time to a store predicted higher shopping goals (Target: $p = 1.13$, $p = .074$; Amazon: $p = 2.80$, $p < .001$).

Together, these findings demonstrate that budgeting time before setting goals increases multiple goal achievement. Importantly, the time-first approach encouraged people to set more achievable goals, but it did not reduce (and sometimes even increased) overall output. Rather than merely eliciting lower goals, putting time first encourages better-calibrated goals that are equally (if not more) motivating *and* more likely to (all) be achieved. This research has substantive

implications for consumer goal pursuit and well-being, and contributes to understanding of goal setting, the relationship between goals and time, resource budgeting, and multiple goal pursuit.

Planning for Multiple Shopping Goals in the Marketplace

EXTENDED ABSTRACT

An average consumer makes two grocery-shopping trips per week, amounting to over $600 billion sales in the United States alone (FMI 2018). The scale of this industry makes studying motivational dynamics that occur during a shopping trip (which is often comprised of multiple, sequential choices; Dhar, Huber, and Khan 2007; Kahn 2018) increasingly important. Furthermore, goals can also have a hierarchical structure (Kruglanski et al. 2002; Huang, Jin, and Zhang 2017). In this research, we connect goal hierarchy theory with findings on the temporal dynamics of goal pursuit to explore how consumer motivation evolves over the course of sequential choices in the marketplace (MSI 2018).

We focus on the grocery shopping domain, in which a consumer's overall goal—*to complete the shopping trip*—is delineated by multiple sub-goals of specific items to purchase. Accordingly, whether a shopper uses a shopping list with specific sub-goals determines the structure of goal pursuit, which could lead to different motivational patterns over the course of grocery shopping. We used the amount of time shoppers spent between sequential product choices—i.e., inter-choice time—as a proxy for their motivation in the store (pilot tests verified the validity of this proxy measure: the more motivated a consumer was, the faster this consumer moved from one item to the next). Importantly, a field study and four online shopping experiments captured a shopping-list dependent dynamic pattern of consumer motivation.

In study 1, 250 shoppers at a grocery store participated in a video tracking study ($N = 2,285$ inter-choice times). We regressed inter-choice time on the cumulative trip duration at the moment of purchase (i.e., progress in the trip), the square of the trip duration, a contrast code for shopping list usage (List = 1; No-List = −1), and the two-way interactions between the list code and trip duration and the list code and squared trip duration with total purchase count as a covariate. There was a positive interaction between squared trip duration and the list code ($\beta = 0.0010$, Wald $\chi^2(1959) = 34.58$, $p < .0001$), suggesting that whether motivation (inter-choice time) followed a curvilinear trend depended on list usage. In the list condition, there was a positive linear effect of trip duration ($\beta = 0.0247$, Wald $\chi^2(1959) = 37.79$, $p < .0001$), such that shoppers exhibited a monotonic decrease in motivation over the course of the trip. In the no-list condition, in contrast, we observed a negative quadratic effect of trip duration ($\beta = -0.0023$, Wald $\chi^2(1959) = 56.02$, $p < .0001$), such that shoppers exhibited a nonmonotonic stuck-in-the-middle motivation pattern.

In study 2, we recruited 250 undergraduate students to complete an incentive-aligned shopping trip in one of two pre-trip planning conditions (list vs. no-list). In the list condition, participants received a budget of $35 and created a list of four or more categories. In the no-list condition, participants received the same instructions but did not create a list. The store included 15 grocery categories presented in a fixed order. The analysis procedure from study 1 ($N = 1,835$ inter-choice times) showed the same interaction between squared trip duration and the list contrast code ($\beta = 2.2482$, Wald $\chi^2(595) = 14.88$, $p = .0001$). In the list condition, there was again a positive linear effect of trip duration ($\beta = 0.7363$, Wald $\chi^2(595) = 14.99$, $p = .0001$). In the no-list condition, there was a negative quadratic effect

of trip duration ($\beta = -3.6705$, Wald $\chi^2(595) = 14.92$, $p = .0001$). We further replicated these patterns with samples of frequent shoppers from Prolific, and with randomized category order and an externally generated list (replication studies with 120 participants and 211 participants, respectively).

In study 3, we recruited 184 participants from Prolific to complete an online shopping trip in one of three conditions: the same no-list condition, and two variations of the list condition to manipulate goal-progress reference points (i.e., to-date vs. to-go frames; Koo and Fishbach 2008). We hypothesized that the to-date condition would replicate patterns observed so far in the list conditions, as using a shopping list naturally directs shoppers' attention to the items checked off from the list (i.e., a to-date frame, Koo and Fishbach 2008); hence, this should lead to a monotonic decrease in motivation as shoppers move away from the starting point and toward the end of the trip. Following this logic, the to-go list condition should result in an opposite pattern (i.e., a monotonic increase in motivation) by focusing shoppers on the end-point of the trip as the reference point. We followed the same analysis procedure with dummy coding of the pre-trip planning conditions. Consistent with the list conditions in previous studies, the to-date list condition again showed a positive effect of trip time (i.e., a monotonic decrease in motivation; $\beta = 3.1457$, Wald $\chi^2(1058) = 47.857$, $p < .0001$). In contrast, the to-go list condition showed a negative effect of trip time ($\beta = -4.6181$, Wald $\chi^2(1058) = 56.94$, $p < .0001$). Finally, the no-list condition again had a negative quadratic effect of trip time ($\beta = -4.0169$, Wald $\chi^2(1058) = 42.43$, $p < .0001$).

This work contributes to the understanding of shopper motivation in three critical ways. First, by employing novel methodologies in the field and online, we uncovered theoretical insights regarding how motivation to complete multiple sub-goals changes in shopping environments. Second, we add to the growing research on shopper psychology and behavior-tracking technology by drawing attention to one important antecedent of in-store behavior—shopping list usage. Third, our findings add to the dialogue that consumer motivation can follow either a linear trend (Kivetz, Urminsky, and Zheng 2006) or a curvilinear trend (Bonezzi, Brendl, and De Angelis 2011). In doing so, we demonstrate how the psychophysics of goal pursuit could apply to a multiple-goal context with consumer-generated goals in the marketplace. Furthermore, supplementary analysis demonstrates that the dynamics of shopper motivation may influence unplanned purchasing behavior. We encourage future research to further explore motivation dynamics across sequential choices and goal hierarchies in the marketplace.

The Better Path Not Taken: Goal-Setting Undermines Opportunity Cost Consideration

EXTENDED ABSTRACT

Consider two drivers who work on both Uber and Lyft rideshare services. One sets a goal to earn $50 on Lyft that evening, while the other does not. Both complete a few rides on Lyft before noticing that Uber has surge pricing, so they would earn more by switching to Uber's platform. Which driver would be more likely to switch? A fundamental finding in the goals literature is that active goals will direct people's choices (Brendl, Markman, and Messner 2003), and according to the value maximization principle, people will choose the option that offers the most utility (Simonson and Tversky 1992). In this work, we explore the interplay of goals and preferences to examine how goal setting can undermine achieving a more preferred outcome. We focus on scenarios like the example above, where the alternative option strictly dominates the status quo, and thus the chooser would be better off by switching. Across five studies, we demonstrate that people are less likely to switch to a dominant alternative when they set a goal versus when they do not.

Study 1 provides initial evidence that setting a goal can decrease one's likelihood of switching to a preferred alternative option in a naturalistic setting. Participants on MTurk read a hypothetical scenario in which they had begun working on MTurk for the day, when they received an invitation for a spontaneous get-together. They rated their likelihood of attending the party instead of continuing to work on MTurk. On the next page, they indicated the extent to which they set a daily earning goal for MTurk. As predicted, participants' likelihood of going to the enjoyable party was negatively correlated with the extent to which they set a daily earning goals ($r = -.38$, $p < .001$), providing initial evidence that setting a goal can decrease the likelihood of switching to more attractive outside opportunities. However, while the party scenario is on average more appealing than completing MTurk studies for small amounts of money, it is not objectively better on all dimensions. Further, the correlational design leaves the study open to alternative explanations.

To account for these issues, study 2 directly manipulated goal-setting in an incentive-compatible paradigm. Participants were tasked with solving anagrams, which paid 2 cents per correct answer. Half were then instructed to set a goal for the number of anagrams they expected to solve before commencing the anagram task. Before proceeding, all participants read about a word-counting task they could do instead, which would pay a 3-cent bonus and was a binary rather than free-response choice. They chose whether to continue with the anagram task or switch to the word-counting task. As predicted, we find that participants in the goal-setting condition were significantly less likely to switch to the more lucrative task ($31\%_{\text{goal}}$ vs. $45\%_{\text{no-goal}}$, $\chi^2 = 4.45$, $p = .035$), resulting in lower payment ($\$0.32_{\text{goal}}$ vs. $\$0.38_{\text{no-goal}}$, $F(1,198) = 6.05$, $p = .02$).

Study 3 tests the underlying mechanism of the effect. Specifically, we examine whether setting a goal decreases switching because of reduced attention to outside opportunities or devaluing the non-goal option. To do so, we added a step to the study 2 design, where participants chose whether or not to read about an alternative task, rather than being explicitly provided with that information. Again, participants with an anagram-goal were less likely to choose the dominant alternative than those without a goal ($24\%_{\text{goal}}$ vs. $53\%_{\text{no-goal}}$, $\chi^2 = 17.5$, $p < .001$). Further, we examined the proportion of participants who did not attend to the outside option, as well as the proportion that chose to switch conditional on reading about the alternative. We find that setting a goal decreased attention to outside alternatives: participants with an anagram-goal (56%) searched less than those without a goal (75%; $\chi^2 = 7.8$, $p = .005$). However, this does not entirely explain our effect. Even among those who searched and attended to the outside alternative, significantly more people without a goal (79%) switched to the dominant alternative than those with an anagram-goal (54%; $\chi^2 = 7.8$, $p = .005$), suggesting that the non-goal alternative is devalued in addition to receiving less attention.

Study 4a explores a boundary to our effect: setting broader goals that better accommodate the outside alternatives. All participants read a hypothetical scenario in which they made monthly donations to a charity providing vaccines to a third-world country. Participants in the narrow-goal condition read that they set a goal to donate a certain amount of money to that charity. Participants in the broad-goal condition read that they set a goal to save a certain number of lives through their donations. After donating to the initial charity for a few months, a more efficient charity solicits a request. Participants in the narrow-goal condition again were less likely to switch than those in

the no-goal condition (*M*narrow-goal = 5.8 vs. *M*no-goal = 6.9, *p* = .001). Setting a broader goal moderates but does not fully attenuate this effect, as those in the broader goal condition were more likely to switch than those in the narrow-goal condition (*M*broad-goal = 6.4 vs. *M*narrow-goal = 5.8, *p* = .079) but still directionally less likely than those in the no-goal condition (*M*broad-goal = 6.4 vs. *M*no-goal = 6.9, *p* = .148). Finally, study 4b replicates and extends this pattern of results to a different context at a gym. Participants read that they set either a broad (calories) or narrow (minutes) goal for a dispreferred exercise machine, and chose whether to switch when their preferred machine becomes available.

We thus demonstrate that setting a goal can decrease the likelihood of switching to a dominant alternative course of action across a variety of contexts, and across naturalistic, incentive-compatible, and hypothetical designs. We attribute this decreased switching to both decreased attention to and devaluing of non-goal alternatives. While setting broader goals dampens this effect, it does not fully attenuate it.

A Multi-Goal Approach to Food Consumption: How Food Restrictions Affect Social-Relationship Goals

EXTENDED ABSTRACT

When consuming food with others, consumers pursue multiple goals simultaneously. One of the primary goals of eating is to satisfy hunger, but eating a meal also brings people together, satisfying social-relationship goals (Ratner and Hamilton, 2015; Rozin 2005). Indeed, food consumption has important consequences for social connection and cooperation (Liberman, Woodward, Sullivan, and Kinzler 2016; Woolley and Fishbach 2017; 2019). The current research takes a multi-goal approach to food consumption, demonstrating how navigating nutritional and health goals when eating can impact the relationship goals consumers hold.

In particular, we examine the effect of dietary restrictions on social connection. Dietary restrictions are increasingly globally and affect both children and adults (Sicherer and Sampson 2018; Tang and Mullins 2017). Whereas existing research focused primarily on the clinical component of dietary restrictions, examining their prevalence, etiology, management, and treatment, we examine the psychosocial impact food restrictions can have for relationship goals. The current research accordingly investigated the influence of food restrictions on experienced social isolation (loneliness).

Using a multi-method approach including large-scale surveys and controlled experiments, we tested the novel prediction that exclusion from a meal, due to the presence of a food restriction, leads people to feel excluded from the social bond. In doing so, we draw on research from multiple disciplines, including psychology (Rozin 2005), anthropology (Fox 1994), and sociology (Fischler 1988), which have emphasized the social and cultural nature of food consumption. If food brings people together and strengthens bonds, by limiting the ability to share in a meal, food restrictions could limit one's ability to share in the social bond as well.

The first three studies examined the association between food restriction (present vs. absent) and isolation. Study 1 used a nationally representative survey of 35,093 households conducted by the CDC that included a proxy measure of loneliness in children (i.e., child has difficulties getting along with others, is often depressed, and is unhappy or tearful). A regression analysis testing the prediction that food restrictions are associated with higher scores on the loneliness proxy measure resulted in a significant effect (*B*=.21, SE=.02, *t*(35091)=12.88, *p* < .001). This association between food restrictions and children's loneliness held when controlling for co-

variates typically associated with loneliness (i.e., age, gender, race/ethnicity, income).

Study 2 extended this finding, using a validated measure of observer reported loneliness in children (assessed via Asher, Hymel, and Renshaw 1984). We measured teachers' reports of 710 students' food restrictions and loneliness. Our analysis replicated Study 1, finding a significant association between reported food restriction and loneliness (*b*=.24, SE=.09, *t*(702)=2.69, *p*=.007), which held when controlling for other covariates that predict loneliness in children.

In Study 3, we extended this finding to a sample of adults (*N* = 495), measuring the presence of food restriction and using a validated measure of loneliness in adults (Revised UCLA Loneliness Scale; Hughes et al. 2004). As in Studies 1-2, we found the predicted relationship between food restrictions and loneliness (*b*=.71, SE=.20, *t*(493)=3.62, *p* < .001). Having a food restriction was associated with an increase in self-reported loneliness among adults, a pattern which held when controlling for other covariates associated with loneliness. This finding also held in a pre-registered direct replication (*N* = 500).

The next three studies tested the causal pathway between food restrictions and loneliness using controlled experiments. In Study 4, we assigned unrestricted participants in a lab study to experience a food restriction or not (i.e., they were restricted from drinking a beverage or they were not restricted) during a social interaction that could be construed as isolating. Those assigned a restriction (vs. not) reported feeling lonelier during the social interaction (*M*restricted=3.88; *M*unrestricted=3.23, *t*(81)=2.14, *p*=.035), providing evidence that food restrictions cause loneliness.

In Study 5, we manipulated the salience of food restriction for unrestricted participants. Those with a pre-existing food restriction who were reminded of their restriction reported feeling lonelier than those who were also restricted, but were not reminded of their restriction (*M*salience=2.95; *M*no-salience=2.26, *t*(158)=3.11, *p*=.002).

Study 6 capitalized on a naturally occurring manipulation of food restriction—the Jewish holiday of Passover where Jewish observers are restricted from eating chametz (leavened food). We surveyed observant Jewish participants who lived in a neighborhood where they were a small minority, and indeed, most reported eating meals with non-observant people. We assessed loneliness twice – first during Passover when participants were restricted, and again after Passover when participants were no longer restricted. As predicted, the effect of food restriction on loneliness replicated in this sample. Observant participants felt lonelier during Passover, when they experienced a food restriction, than after (*M*during=2.66; *M*after=2.04, *t*(40)=2.75, *p*=.009).

One remaining question is whether there is a kernel of truth in feeling isolated as a result of food restrictions: Do people actually exclude others who have food restrictions? To answer this, we asked unrestricted participants to select a person to play an online game with them. Participants chose between two people after reviewing different information about each person, including whether or not they had a food restriction. As predicted, participants were significantly more likely to avoid the restricted individual, regardless of the reason for the restriction (i.e., peanut allergy, lactose intolerant, gluten intolerant), with only 41.5% of people selecting the person with a food restriction to partner with (*z* = -2.88, *p* = .004).

When we eat with others, we pursue multiple goals, from reducing hunger, meeting nutritional needs, and managing social relationships. The studies reported here demonstrate how pursuing a health goal (i.e., navigating a food restriction when eating) can harm social-relationship goals, identifying food restriction as a contributing factor to loneliness. Because food consumption is inherently social,

people who are unable to participate in the meal also, to some extent, are unable to participate in the social bond. With the knowledge that those with actual or imposed food restrictions feel lonelier, this work points to the theoretical connection between food consumption and social bonding.

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Getting Wiser? New Insights into Consumer Research Practices

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Paper #1: Using *P*-Curve to Assess Evidentiary Value from 10 Years of Published Literature

Leif Nelson, University of California, Berkeley, USA
Fausto Gonzalez, New York University, USA
Michael O'Donnell, Georgetown University, USA
Hannah Perfecto, Washington University in St. Louis, USA

Paper #2: 99% Impossible: A Valid, or Falsifiable, Internal Meta-Analysis.

Joachim Vosgerau, Bocconi University, Italy
Uri Simonsohn, ESADE, USA
Leif D. Nelson, University of California Berkeley, USA
Joseph Simmons, Wharton School, USA

Paper #3: The Price of Behavioral Research

Jason Roos, Erasmus University Rotterdam, The Netherlands
Gabriele Paolacci, Erasmus University Rotterdam, The Netherlands

Paper #4: Tighter Nets for Smaller Fishes: Mapping the Development of Statistical Practices in Consumer Research Between 2011 and 2018

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Benjamin Scheibehenne, University of Geneva, Switzerland

SESSION OVERVIEW

In the last decade, behavioral researchers have faced increasing pressure to improve the methodology of data collection and analysis. A large survey documented the prevalence of research practices that are now considered "questionable" (e.g., stopping data collection when the desired results reached significance, John, Loewenstein, and Prelec, 2012). Similarly, several replication failures increased researchers' awareness of publication bias, file drawer effects, and other forms of selective reporting that can increase the prevalence of false positive findings in the literature (Ioannidis, 2005). A new wave of methodological research emerged, that revived old warnings (e.g., about too small sample sizes, Cohen, 1992) and proposed new standards for summarizing results (e.g., internal meta-analysis, McShane & Böckenholt, 2017) and new methods to assess the evidential value of a set of results (*p*-curve, Simonsohn, Nelson, and Simmons, 2014). Has consumer research become wiser as a result? How can it improve its methods?

The four papers in this session present new descriptive and normative insights into the state of the methodology of empirical consumer research. Nelson, Gonzalez, O'Donnell, and Perfecto will present a p-curve analysis of more than 400 articles in social psychology. This will yield insights into the robustness of phenomena that consumer researchers often build upon. Vosgerau, Simonsohn, Nelson, and Simmons argue that the validity of internal meta-analyses relies on assumptions (e.g., complete absence of selective reporting) that are often unrealistic. As a result, they show that relying on internal meta-analysis to establish the robustness of an effect can greatly inflate, rather than reduce, the rate of false positives. Roos and Paolacci leverage the transparency of online samples to investigate the extent to which monetary considerations are a substantial constraint to researchers' sampling decisions. They conducted an analysis of the MTurk study population before and after Amazon raised their commissions, and a coupon field experiment with researchers on Prolific.

Results indicate that alleviating financial constraints would result in more studies and larger samples. Krefeld-Schwalb and Scheibehenne illustrate how selective reporting and statistical power in published consumer research has developed over time. By analyzing more than 900 articles in consumer research from 2011 to 2018, they found evidence that selective reporting has decreased. Together with an increase in sample size and decrease in effect size, these results suggest that the consumer research literature suffers less from false positive and false negative findings than it did in the past.

Altogether, these four papers contribute to our understanding of how individual consumer researchers and the field as-a-whole have navigated the methodological turmoil of the last few years and suggest ways to further strengthen our experimental research practices. We hope this session will trigger further interest in making consumer research wiser by improving its methodological practices.

Using *P*-Curve to Assess Evidentiary Value from 10 Years of Published Literature

EXTENDED ABSTRACT

P-curve is a tool that allows researchers to evaluate the evidentiary value in a given set of studies. The logic of *p*-curve is straightforward: because *p*-values are a conditional probability of observing a set of data (or data more extreme than what is observed) given that a null hypothesis is true (i.e. no effect), we know what the distribution of *p*-values should look like in the presence or absence of true effects.

If the null hypothesis is true, *p*-values will be uniformly distributed and show a flat line distribution with each value between 0 and 1 being equally likely. On the other hand, however, if an effect is true and the null hypothesis should be rejected, *p*-values should be strongly right-skewed with a spike at *p* approaching 0. The steepness of the curve is related to statistical power, with less power being associated with a flatter curve. This distribution of *p*-values will always occur when an effect is true, because if an effect truly does exist, the likelihood of finding large *p*-values is extremely small, and the bulk of *p*-values associated with statistical tests for a true effect will approach 0.

Finally, given the prevalence of *p*-hacking in published findings, *p*-curve is also a useful tool for identifying when *p*-hacking is likely present in a set of results. Because researchers are incentivized to report statistical tests with *p*-values at least below .05, if *p*-hacking is present in a set of studies, the distribution of *p*-values will be left-skewed with a spike approaching .05.

The simple logic of *p*-curve, the relationship between *p*-curve and statistical power, and the known distribution of *p*-values makes *p*-curve a powerful tool for researchers to assess how likely a set of studies (as in a paper, a journal, or a given research topic) are to contain evidentiary value for a true effect, and can be an important lodestar for researchers who are beginning to approach published findings at all levels.

To date, however, there does not yet exist a comprehensive database of *p*-values and there are few *p*-curves that cover a broad swathe of the literature. Indeed, while *p*-curving a literature is straightforward, it is an effortful process. Developing a *p*-curve disclosure table requires, at a minimum, reading a paper and reporting the research-

ers' hypothesis (with quotes from the paper), the study design, the key statistical result, statistical tests, and text from the paper verifying these elements. Although arduous, collecting this information is crucial for allowing authors of *p*-curved papers to easily assess the accuracy of the *p*-curve. In our paper, we are attempting to reduce these high startup costs associated with developing a large-scale *p*-curve database by systematically *p*-curving a decade's worth of findings in Section I of the *Journal of Personality and Social Psychology* (JPSP). We are also coding data beyond a typical *p*-curve disclosure table, such as keywords, whether the study excludes participants, specific experimental manipulations, whether the study tests mediation, and whether results are reported with and without covariates, in order to facilitate further metascientific analyses. We chose Section I of JPSP because it focuses on studies related to Attitudes and Social Cognition, contains the bulk of experiments in the journal, and is of the most direct relevance to Consumer Behavior researchers.

We have undertaken this endeavor as a means of developing a starting point for researchers who are interested in assessing the evidentiary value in a broad cross-section of psychological research that is relevant to scholars in marketing, management, social psychology, and many other behavioral fields. This *p*-curve database includes over 400 papers, each of which has been randomly assigned to be *p*-curved by two independent coders. The breadth of papers we have reviewed will allow researchers to assess entire streams of research within a given topic, evaluate trends in evidentiary value over time, assess whether specific manipulations or statistical results are associated with more or less evidentiary value, and so on. This will not only help get a sense of different literatures' reliability, but also help researchers developing new ideas decide which areas may be the most fruitful for building upon.

The development of this database is still ongoing, but the initial set of 10 years' worth of papers will be completed in Summer 2019. We plan to present a set of our most interesting, and consumer relevant findings from this database. We will also share the *p*-curve database as a public resource for consumer behavior researchers interested in evaluating the published research within *JPSP*.

99% Impossible: A Valid, or Falsifiable, Internal Meta-Analysis.

EXTENDED ABSTRACT

Internal meta-analysis involves statistically aggregating all studies reported in a paper, usually to examine whether the overall effect is statistically significant. Internal meta-analysis increases statistical power, potentially encouraging researchers to report more of their studies, particularly those that did not yield conventional levels of significance. These purported advantages – more statistical power and less "file-drawering" – have made internal meta-analysis popular.

We propose that internal meta-analyses are likely to have unintended and potentially catastrophic consequences for the credibility of published findings. The validity of internal meta-analysis hinges on the assumption that *none* of the analyzed findings were affected by selective reporting; the method is valid only if one analysis were conducted on each study, and only if every study was included in the internal meta-analysis.

We worry that some researchers may believe that the selective reporting of favorable analyses is immoral, a malevolent form of dishonesty. By this logic, saying that selective reporting is almost inevitable is like saying that almost all researchers are bad people. We believe that selective reporting of favorable analyses and studies is not immoral, but in most cases the inevitable consequence of

(moral) human beings' tendency to interpret ambiguous information in ways that are consistent with their desires and beliefs (Kunda, 1990; Vazire, 2015).

To appreciate the near inevitability of this, consider what it would take to *not* do it. Researchers would either have to be indifferent to the outcome of their studies, or they would have to perfectly plan out in advance how many and which studies to run, which measures to analyze, how to score the measures, what sample sizes to use, which covariates to include, how exactly to deal with outliers or inattentive participants, etc. Motivated researchers who do not *perfectly* plan out their entire research project in advance will have to make *ex post* decisions about which studies to run, how to measure variables, which analyses use. And, because they are invested in the research project, they will make those decisions in ways that benefit them rather than in ways that harm them. Indeed, in the presence of desire and in the absence of perfect planning, some amount of selective reporting is virtually inevitable.

We show with simulations that small amounts of selective reporting can have dramatic consequences for internal meta-analyses. For example, the minimal selective reporting that inflates an *individual study's* false-positive rate to just 8% will inflate the false-positive rate of a 10-study internal meta-analysis to 82%!

Imagine that researchers only conduct internal meta-analyses on sets of studies that were individually pre-registered, so there is no *p*-hacking at all. Even under these exceptional circumstances, internal meta-analysis would be invalid if the decision about which studies to include in the meta-analysis was at all influenced by that study's results. If a researcher studying a false hypothesis needed 5 (out of 10) *individually* significant studies to successfully publish her result, she would have a one in 451,398 chance of succeeding. If the same researcher merely needed a significant *meta-analysis* of the best 5 out of 10 studies, she would have a 146,795 in 451,398 chance (or 32.5%) of succeeding. Ironically, internal meta-analysis *exacerbates* the consequences of the file-drawer problem, rather than alleviating it.

Finally, false-positive internal meta-analyses are prohibitively difficult to falsify, because if the original studies are distorted by selective reporting, the combination of original and replication studies will also be distorted by it. Using the previous example of a false-positive 10-study internal meta-analysis showing an effect, we proceeded to add 10 studies drawn under the null, re-running the meta-analyses now with 20 studies each (10 original and 10 replication studies). When all ten new replications had the same sample size as the original, 47% of false-positive internal meta-analyses remained significant. When all ten replications had 2.5 times the original sample size, still 30% of internal meta-analysis remained significant. Keep in mind that all of this assumes something extremely optimistic and unrealistic – that replicators could afford (or would bother) to replicate every single study in a meta-analysis and that others would judge all of those replication attempts to be of sufficient quality. Absent this wild assumption, we are left with the possibility that one cannot ever realistically attempt to falsify a false-positive internal meta-analysis.

Concluding, internal meta-analyses are valid only if (1) they exclusively contain studies that were properly pre-registered, (2) those pre-registrations were perfectly followed, and (3) the decision of whether to include a given study in an internal meta-analysis is made before *any* of those studies are run. These conditions are typically met in many-lab replication efforts, where the set of studies to be run is predetermined, and the exact design of each study is pre- predetermined also (see e.g., Alogna et al., 2014; Ebersole et al., 2016; Hag-

ger et al., 2016; Klein et al., 2014; McCarthy et al., 2018; O'Donnell et al., 2018; Verschuere et al., 2018; Wagenmakers et al., 2016).

Outside many-lab replication efforts, we recommend to never draw inferences about the existence of an effect from internal meta-analyses. We don't believe in the robustness of anchoring effects or motivated reasoning or preference projection because their findings have been meta-analyzed; we believe in them because the studies supporting them are well designed and because exact replications of these effects have been overwhelmingly successful. Scientific knowledge advances one replicable study at a time.

The Price of Behavioral Research

EXTENDED ABSTRACT

Experimental studies conducted on samples of human participants generate the bulk of evidence that drives behavioral consumer research forward. By collecting more evidence, whether through additional studies or larger samples, consumer researchers can measure behavior and test theories with greater precision. However, collecting evidence carries a monetary cost, and thus often entails a significant investment of scarce resources. How do researchers trade off monetary and scientific considerations? Two parallel phenomena make this long-standing question both pressing and answerable. First, the low replicability rate of findings in the behavioral sciences has revived old concerns about insufficient statistical power (e.g., Cohen 1992; Fraley and Vazire 2014; Maxwell 2004). It is important to understand whether sampling practices are bounded by financial constraints. Second, data collection in consumer research is moving away from physical laboratories in favor of online labor markets such as Amazon MTurk and Prolific (Goodman and Paolacci 2017). This removes many of the fixed costs of data collection, and thus make sampling decisions more dependent on the marginal cost of collecting additional observations. Moreover, the transparency of these marketplaces makes it possible to study researchers' behavior with greater precision.

Normatively, how should researchers' decisions about evidence to collect respond to the price of such evidence? The prescription of standard power analysis is straightforward. Sample sizes should be based on expected error rates and effect sizes, with no consideration for monetary costs. If the prescribed sample size happens to be compatible with the researcher's budget, then the study can be conducted. Otherwise, the study is not supposed to be carried out. In other words, a different price should normatively lead to conducting a different number of studies, but not to collecting differently sized samples. We investigated these possible patterns in two separate studies on two major suppliers of online participants.

In the first study, we analyzed whether researchers responded to Amazon's decision to raise the MTurk commissions in July 2015—factually increasing the price of data collection by 27%—by conducting fewer studies. Crawling data via the MTurk Tracker (Difallah et al. 2015), we analyzed surveys posted on MTurk in the two months before and after the price increase. We sought to measure the effect of the price increase on researchers who were already MTurk users. Hence, the analysis only considers activity among requesters who posted at least one survey or survey-based experiment on MTurk in the two months before the increase. The 2,292 requesters meeting these criteria posted 11,689 surveys during this four-month period.

We conducted a non-parametric change point analysis (Matteson and James 2014) on four quantities: the total number of surveys posted, the number of unique requesters associated with those surveys (some requesters post more than one survey per day), the average payment per survey (not the hourly rate), and the maximum time participants were given to complete their surveys. The algorithm identified two change points—June 27 (less than a week after the new prices were announced, $p = .014$) and July 21 (the day before the price increase, $p < .001$). These change points partition the data into three periods—*pre-announcement*, *post-announcement*, and *post-increase*.

To summarize results, prior to the announcement, an average of 82.5 (SE 5.1) requesters posted 135.3 (SE 20.7) surveys each day, offering an average reward of \$.60 (SE \$.02). After the announcement, the number of requesters and surveys did not meaningfully change, though the average reward increased by more than half to \$.96 (SE \$.06) per survey and grew more volatile. Most importantly, in the two months following the price increase, while average rewards fell to a value closer to the pre-announcement average, \$.72 (SE \$.02) per survey, the daily number of surveys and active requesters dropped by about half, to 43.4 (SE 2.4) requesters and 62.0 (SE 3.6) surveys. The maximum time allotted to surveys did not meaningfully vary over the four months. In sum, these results suggest that researchers reacted to the price increase by conducting fewer studies.

Importantly, the MTurk Tracker does not allow observing sample sizes. To understand whether sampling prices affect sample sizes, we conducted a preregistered field experiment on the entire population of researchers registered with Prolific who reside in the Netherlands (N = 167). In a between-participants design, researchers were either assigned or not to receiving a 15% discount off the total cost of their next study. Contrary to the prescription of standard power analysis, we found that researchers receiving the discount collected significantly larger samples (M = 290 vs. 116, medians = 240 vs. 70, Wilcoxon rank sum test p = .0086). Many compatible explanations exist for this effect: the discount may have affected sample sizes by influencing researchers' choice of which study to run next, prompting a significant alteration in the design or sample size of an already-planned study, or increasing the budget allocated to a study. Regardless of the mechanism, a short-term decrease in the cost of collecting evidence led researchers to accumulate far more evidence than their counterparts in the control.

The results from our second study suggest that sample sizes are affected by financial constraints, even in relatively cost-effective research environments. Critically, underpowered research has many causes, including underused or misinformed power analysis, and failing to recognize questionable research practices as such (e.g., Simmons, Nelson, and Simonsohn 2011). However, these results suggest that above and beyond these components, researchers might collect smaller sample sizes than they would if they were less financially constrained.

Taken together, the findings from these two studies illustrate how the production of evidence in the behavioral sciences does not depend exclusively on scientific considerations. On the contrary, researchers respond to changes in the opportunity costs of empirical studies by adjusting their sample sizes, and by conducting more or fewer studies. We will discuss the statistical, design, and institutional solutions available to researchers to trade off financial and scientific considerations more efficiently.

Tighter Nets for Smaller Fishes: Mapping the Development of Statistical Practices in Consumer Research Between 2011 and 2018

EXTENDED ABSTRACT

The replicability of empirical findings is a core aspect of (consumer) research (Popper, 1959). Recently, the need to improve the replicability of published findings has been called for across the

empirical social sciences, including consumer research (e.g. Ioannidis 2005). Towards this goal, several major journals have revised and strengthened their publishing policies, focusing more on the transparency and reproducibility of published research (e.g. Inman, Campbell, Kirmani, & Price, 2018; Pechmann, 2014). However, despite the awareness for the topic in the field, up to date, there has been no comprehensive evaluation of the replicability of published consumer research, nor how it developed or perhaps even improved in recent time. The present study provides a systematic review of the replicability of published consumer research. In particular, we investigated whether the replicability of consumer research has increased in recent years. Given the increasing discussion around the topic, such an improvement seems plausible.

The replicability of a statistical test depends on its statistical power which in turn depends on sample size and effect size. Once both are known, one can determine a distribution of p-values, i.e. the probability of observing different p-values. However, the effect size reported in published studies might not necessarily represent the true effect size of the statistical test, due to selective reporting and publishing of significant over non-significant findings (Duval & Tweedie, 2000; Egger, Smith, Schneider, & Minder, 2015; Ferguson & Brannick, 2012; Franco, Malhotra, & Simonovits, 2014; Rosenthal, 1979; Sterling, 1959). Together with other ways of selective reporting (Gelman & Loken, 2014), this increases the risk of overestimating the power of published studies and can increase the number of false positive findings in the literature and hence decrease the replicability of published findings.

One way to investigate the amount of selective reporting in published research is the analysis of the distribution of reported p-values (Simonsohn, Nelson, & Simmons, 2014). With any non-zero effect, the p-value distribution is right skewed, smaller p-values are more likely observed in a statistical test than higher p-values. If the effect size is zero, the distribution of p-values is uniform. In contrast, selective reporting, given that the effect size is zero, will produce a p-value distribution that is left skewed, below the level of significance. Thus, selective reporting distorts the distribution of p-values by increasing the proportion of values below the level of significance relative to the proportion that would be expected based on the observed statistical power.

Given the recent discussions in the social sciences on how to improve methodological and statistical practices in the field, we expected to observe an increase in the statistical power in the consumer research literature in the time period from 2011 to 2018. We further expected that publication bias decreased across that period. To test these hypotheses we focused on two commonly applied statistical tests in empirical consumer research, namely F-tests (i.e. analysis of variance) and t-tests. For both tests we analyzed the reported statistics across 971 articles published in the Journal of Consumer Research, the Journal of Consumer Psychology and the Journal of Marketing during that time period.

We first analyzed changes in the statistical post-hoc power over time. Given that sample sizes increased significantly from an average of 128 subjects in 2011 to on average 204 subjects in 2018, but effect sizes decreased across the same period from a median of .30 in 2011 to .22 in 2018, the average post-hoc power did not change. We further found no significant difference between the journals for any of the dependent variables.

Second, we tested whether the distribution of reported p-values changed in accordance with the distribution expected based on the reported power. On that account we analyzed the proportion of significant p-values in the articles as reported and expected based on the average reported power over time. We further separately investigated

the development of p-values below and above a level of significance $\alpha = .005$ as proposed by Benjamin et al. (2017).

Despite that there was no decrease in statistical power over time, the reported proportion of significant findings, $p < .05$, decreased. However, the frequency of p-values in the intervals above and below the stricter level significance developed differently. P-values above the stricter level of significance, $.005 < p < .05$, decreased. Across all years and journals, p-values in this interval, $.005 < p < .05$, were yet more often reported than expected based on the power distribution. To the contrary, p-values below the stricter level of significance, $p < .005$, were less often reported than expected. Over time, however, the discrepancy of the expected and observed proportions of p-values has decreased.

One possible explanation for these results is that the increase in sample size over time indicate increased awareness for the need of higher powered studies. As a consequence, the decrease in effect size over time can be interpreted as a more exact estimation of the true sample sizes (Loken & Gelman, 2017; Greenwald, Gonzalez, Harris, & Guthrie, 1996; Lane & Dunlap, 1978; Maxwell, 2004; Schmidt, 1992). Moreover, the reduction in discrepancy of the expected and the observed proportions indicates that selective reporting of significant findings in consumer research has decreased over time.

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Leveraging New Technologies in Marketing: Its Limitations and Opportunities

Chair: Shwetha Mariadassou, Stanford University, USA

Paper #1: Augmented Reality Dissected: Decoupling the Visual and Interactive Elements of AR in Encouraging Consumers to Read Food Reviews

Jen H. Park, Stanford University, USA
Szu-chi Huang, Stanford University, USA

Paper #2: When Virtual Reality Backfires on Reality: VR Reduces High Sensation Seekers' Desire for Stimulation

Youjung Jun, Columbia University, USA
Jae Jaeyeon Chung, Rice University, USA
Gita Johar, Columbia University, USA

Paper #3: Recommendation Modality Affects Choice: Auditory Recommendations are Followed More Than Visual

Shwetha Mariadassou, Stanford University, USA
Christopher J. Bechler, Stanford University, USA
Jonathan Levav, Stanford University, USA

Paper #4: Should I Give Siri my Credit Card? How Mode of Interaction Affects Willingness to Share Personal Information with Machines

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Matthew Schroeder, Facebook, USA

SESSION OVERVIEW

New technologies that allow consumers convenient and interactive ways to learn about and purchase products are changing the landscape of consumer behavior. The aim of this session is to showcase how different types of new technologies are being incorporated into marketing and identify the strengths and limitations of such technologies. We will examine how four different types of technological advancements (e.g. augmented reality, virtual reality, voice interfaces, and virtual assistants) affect different stages of the decision-making process: information seeking, product evaluation, consumption choice, and method of purchase.

The session will open with a paper that focuses on technology in product presentation. **Park and Huang** will discuss the effects of augmented reality on information seeking and product evaluation. Augmented reality technology expands the physical world by superimposing digital data onto physical objects. Across three studies, including an in-lab study in which participants use iPads and QR codes to obtain information about food products, **Park and Huang** identify augmented reality technology as most effective when it contains both visual elements and interactive information. In the second paper, **Jun, Chung, and Johar** offer insight into the limitations of virtual reality– in which consumers immersively experience a world outside of reality—in encouraging future consumption. Across a field study and lab studies, they find that providing stimulation through virtual reality experiences may decrease consumers' preference for similar stimulating activities if those consumers are highly sensation-seeking. Thus, heterogeneity in consumers moderates the impact of virtual reality in subsequent choice.

The final two papers of the session explore consumers' interaction with virtual assistants and voice interfaces and provide implications for completing the product purchase. Voice interfaces allow users to interact with a system through speech and auditory responses. Voice interfaces therefore can both receive from and provide information to users, including information about search results and product recommendations. The third paper, by **Mariadassou, Bechler, and Levav** shows that auditory recommendations are adopted more

than visual recommendations, highlighting the potential impact for voice assistants in consumers' ultimate product choices. Notably, the effect persists regardless of the type of voice used in auditory recommendations: human voices or automated voices. Last, across three field experiments in which participants interact with a virtual assistant, **Schroeder and Schroeder** show that consumers are more likely to reveal personal information to a machine when they speak rather than type to the machine. This personal information includes search history, purchase history, and credit card information. These results provide insights into consumers' likelihood of following through on purchase intentions as well as implications for cybersecurity.

Combined, these four papers suggest that the effects of new technologies in marketing are nuanced, with each technology possessing unique strengths in assisting consumers with evaluating, choosing, and purchasing products. The papers draw from literature on sensory seeking, stimulation, anthropomorphism, cognitive psychology, and modalities to explore underlying psychological processes behind human interaction with technology. We believe that this session will attract a diverse audience and provide fruitful discussion for innovative and timely research regarding technology in consumer behavior.

Augmented Reality Dissected: Decoupling the Visual and Interactive Elements of AR in Encouraging Consumers to Read Food Reviews

EXTENDED ABSTRACT

Augmented Reality technology overlays digital data onto physical objects in real-time and provides an interactive experience. With its increased affordability, AR has become one of the most exciting new tools for marketing and has been adopted in consumer-relevant domains such as AR food menus (e.g., Kayaq). However, little work has explored how consumers experience this new technology and its impact on consumer preference.

Specifically, recent research shows that AR has two key elements—rich visual prompts and interactivity when calling out information (Azuma et al. 2001; Javornik 2016). Visual annotations of AR, more technically known as "augmentation," are its most salient and well-developed feature (Billinghurst and Kato 2002; FitzGerald et al. 2013). Moreover, interactivity is one of the most established concepts related to digital consumer technologies (Hoffman and Novak 1996), soliciting a strong reaction from users through immersion and enjoyment (Hoffman and Novak 2009).

In this research, we tease apart these two critical dimensions of AR—visual and interactivity—and test how these dimensions affect consumers' desire to read food reviews and the type of food information they access. In three studies including a lab experiment with 15 AR codes on 15 snack items, we manipulated the visual and interactive features respectively, and found that people were more likely to interact with food reviews (e.g., scan a code, click a button to load information) when the food was visually present, underscoring the central role that visual prompts played. Interestingly, presenting food reviews in AR boosted the browsing of unhealthy (vs. healthy) food.

Study 1 ($N = 605$) tested the effect of visual and interactive elements in AR on the likelihood of exploring snack information and subsequent liking toward the snacks with a 3 (information format: visual-and-interactive combined vs. interactive-only vs. visual-only; between-subjects) x 2 (food type: healthy vs. unhealthy; within-subjects) mixed design. All participants were asked to read information

about 10 snack options (five healthy and five unhealthy) and received basic text information–snack name, ingredients–for the snacks, all of which were displayed on a page in a menu board-like fashion. In the visual-and-interactive combined condition, participants saw the product image (visual) and the "customer reviews" button, which displayed reviews upon clicking (i.e., requiring interaction from the users). In the interactive-only condition, the "customer reviews" button was present without the snack images. In the visual-only condition, the images were present, but all review text was displayed as the default without the button. After exploring the snacks, participants completed the rating questionnaire.

Among the conditions where participants needed to "click/interact" to load information (i.e., the combined and interactive-only conditions), we observed the hypothesized format x food type interaction, such that participants clicked more *unhealthy* (vs. healthy) snacks when the visual was present ($M_{Combined}$ = 2.64) than when absent ($M_{Interactive-only}$ = 2.09, p = .001); those in the visual-only condition did not click to load information, thus their clicking behavior was zero. Importantly, those in the visual-and-interactive combined condition rated *unhealthy* snacks more favorably ($M_{unhealthy}$ = 4.70 vs. $M_{healthy}$ = 4.35, p = .002), whereas such preference toward unhealthy snacks did not occur in conditions where only the visual or the interaction was present.

Study 2 (N = 607) examined whether increased browsing and liking of unhealthy snack could translate to food domain as well. Participants imagined exploring digital menu boards at the TGI Friday's restaurant and reviewed 10 entrées (five healthy and five unhealthy). As in Study 1, the information format varied across conditions (visual-and-interactive combined vs. interactive-only vs. visual-only). Consistently, participants were more likely to seek customer reviews of *unhealthy* food when the visual was present ($M_{Combined}$ = 2.39) than when absent ($M_{Interaction-only}$ = 2.02, p = .02); those in the visual-only condition did not need to click/seek information. We again observed that participants rated the *unhealthy* entrées significantly higher in the combined format ($M_{Combined}$ = 4.44) than in the other two formats ($M_{Interactive-only}$ = 4.29, $M_{Visual-only}$ = 4.32), although this difference was only directionally significant, p = .16. Finally, participants were more likely to choose an *unhealthy* entrée when it was visually stimulating ($M_{Combined}$ = 52.2%) than when not ($M_{Interaction-only}$ = 44.9%), p = .07.

Study 3 (N = 442) tested the AR effect in the lab, where participants could physically examine products and use a device to scan the codes to load more product information. We manipulated the visual and interactivity of AR across three conditions and tested whether the effect was unique to social reviews by adding other types of information, resulting in a 3 (format: visual-and-interactive combined vs. interactive-only vs. visual-only; between-subjects) x 3 (food: healthy vs. neutral vs. unhealthy; within-subjects) x 3 (information: social vs. exercise vs. nutrition; between-subjects) mixed design. In the visual-and-interactive combined condition, 15 snacks (five healthy, five neutral, five unhealthy) were laid out on the table, each snack with a unique QR code to be scanned with an iPad for additional information. In the interactive-only condition, participants first viewed snacks without the QR codes in one room and moved to another room, where they interacted with the QR codes without the food items (visuals) present. In the visual-only condition, we removed the interactivity aspect of QR codes, providing food information (preloaded onto all iPads) without scanning.

We found consistent results; when the QR codes provided social information (i.e., customer reviews), participants in the combined condition were more likely to explore *unhealthy* snacks than those in the interactive-only condition ($M_{Combined}$ = 46.3% vs. $M_{interactive-only}$ = 38.6%, p = .036). Furthermore, participants in the combined condi-

tion rated *unhealthy* snacks higher ($M_{Combined}$ = 4.59) compared to when only one of the two was present ($M_{Interactive-only}$ = 4.17, $M_{Visual-only}$ = 4.42, p = .06). Importantly, these effects were only present when the augmented information was social (vs. nutrition, exercise).

Together, we find that both the type of physical products (e.g., unhealthy vs. healthy food) and the delivery of augmented information (e.g., visual prompts) are critical in determining consumers' likelihood of using AR and their subsequent preference of the product.

When Virtual Reality Backfires on Reality: VR Reduces High Sensation Seekers' Desire for Stimulation

EXTENDED ABSTRACT

Virtual Reality is "a set of technologies that enable people to immersively experience a world beyond reality" (Berg and Vance 2016), allowing users to feel "present" in another world and businesses to enhance brand engagement (Bailenson 2018). Six Flags offers VR roller coasters in partnership with Samsung, and Warner Bros. released a VR trailer for *Conjuring 2*, in which viewers investigate a paranormal activity in a haunted house alongside the protagonists. Focusing on such stimulating virtual experiences, we find that contrary to marketers' expectations that VR will invite future consumption, using VR can backfire and decrease consumers' desire for more.

The need for stimulation is inherent in humans (Leuba 1955) and consumption activities can satisfy this need. Consumers try new brands, engage in risky activities like skydiving, and add variety to their choices to achieve stimulation (Howard and Sheth 1969). Particularly, those with higher need for sensation (i.e., high sensation seekers) dislike predictable or repeated experiences because they experience the same stimulus object more intensely than low sensation seekers (Raju 1980; Berlyne 1960). For example, they generate more curiosity-related thoughts while watching an ad (Pearson 1970), and show greater inquisitiveness (e.g., posing questions, detecting more perceptual cues) that go beyond the objects they see (Wright 1973). We predict that highly sensation-seeking consumers will experience the virtual stimulus intensely in order to satisfy their need for sensation in VR, reducing their subsequent desire for similar, stimulating consumption experiences in physical reality.

Two pilot tests justify our focus on stimulating virtual experiences, by revealing that people believe an experience delivered through the VR technology is more stimulating than the same experience delivered without VR, and that most of the publicly available VR contents are indeed stimulating. 305 participants indicated how much stimulation various experiential mediums (e.g., TV, radio, VR) elicit. As predicted, people thought VR was the most stimulating medium of vicarious experiencing, compared to watching television (M = 65.4, p < .05), imagining (M = 49.0, p < .001), listing to the radio (M = 43.6, p < .001), or reading about an event (M = 39.4, p < .001). Next, a content-analysis of 150 publicly available VR videos (i.e., Youtube "Virtual Reality" channel) revealed that 77% of the videos featured highly stimulating outdoor activities (e.g., skydiving). Even the remaining 23% on indoor activities used highly stimulating contexts (e.g., haunted house).

Study 1 revealed that high sensation seekers report attenuated desire for sensation after using VR. The study took place in a South Korean "VR theme park", a commercial VR entertainment complex. All customers (N=283) to the theme park were considered high sensation seekers. Customers indicated their desire for stimulation by first indicating their preference for various exciting consumption activities (e.g., bungee jumping compared to a massage), and then actually choosing between a 'mysterious' candy of unknown taste

(stimulating choice) or a familiar fruit candy. These tasks were done either before or after they played VR games in the theme park (2 conditions). After (vs. before) playing VR games, participants' preference for stimulating consumption activities decreased ($p < .001$), and the percentage of participants who chose the mysterious candy dropped from 63% to 47% ($p = .001$).

In study 2, we kept the experience (i.e., video) the same, while manipulating whether this was delivered through VR or not. In a 2 (VR vs. control) x continuous (sensation-seeking score) design, 222 participants watched a video about TomorrowLand Electric Dance (EDM) music festival in the lab. The video allowed a 360° view of this festival. Participants watched the video on a smartphone either through a VR headset (VR condition) or without it (Control condition). In the VR condition, the smartphone was inserted into a VR headset so that participants could put on the gear to watch the video, hands-free. Participants in the Control condition held the smartphone with their hands. Then, they allocated 100 points to indicate willingness to download each of the 8 musical genres, including EDM, R&B, and Jazz, onto their actual playlist. Finally, they completed individual sensation-seeking scale (Zuckerman et al., 1964). We found a significant interaction ($p = .02$) such that when high sensation seekers experienced the EDM festival through VR, their willingness to download exciting EDM onto their playlist significantly decreased, compared those in the Control condition (floodlight region significant on sensation-seeking score: 3.67 and higher).

Study 3 showed that our effect is driven by vicarious need satisfaction in VR, by showing that the effect is mitigated when virtual and physical experiences satisfy different (vs. similar) consumer needs. Study 3 employed a 2 (VR vs. Control) x 2 (Ad: stimulating vs. calm) x continuous (sensation-seeking score) design. 286 participants watched a stimulating video about jumping off a cliff on a rope, inducing the feeling as if viewers are actually diving into a 400-ft canyon. After manipulating the use of VR as in Study 2, we asked participants to evaluate a consumer goods advertisement. The ad either offered a stimulating consumption experience that was similar to the previous VR experience, or a different experience that helps consumers feel calm and peaceful. Results revealed a significant 3-way ($p = .03$) interaction: for high sensation seekers, providing stimulation in VR decreased their attitude toward a similar, stimulating ad (VR x sensation seeking: $p = .03$; floodlight region - sensation seeking score ad 3.98 and above), but not toward an ad that appeals to different consumer needs (i.e., to feel calm) (VR x sensation seeking: $p = .38$).

We show that providing stimulation in VR can lower highly sensation-seeking consumers' subsequent desire for stimulation in physical reality. These individuals express less preference for products or ads that are similar to the VR experience they had already gone through. We demonstrate our effect in various contexts (i.e., music consumption in both virtual and physical reality; gaming in VR and food consumption in physical reality), using a field study and lab experiments. This suggests that firms should be mindful about who they are targeting and the possibility of VR's "spoiling" effect on reality.

Recommendation Modality Affects Choice: Auditory Recommendations are Followed More Than Visual

EXTENDED ABSTRACT

Voice interfaces, such as the Amazon Echo, Google Home, and Apple HomePod, are currently among the world's fastest-growing technology segments (Molla 2018). They are used for online search, information, shopping, and—increasingly—recommendations. Pop-

ular sentiment suggests that voice technology is currently not achieving its full potential and is simply another tool through which consumers can receive information. This idea assumes that consumers weight information identically, regardless of the modality through which they receive information. Conversely, our research suggests that modality does matter: technology can create different physical experiences despite identical information, which leads to different behavioral consequences. In this research, we find that consumers are more likely to follow recommendations they hear rather than recommendations they read.

One may have predicted the opposite result. In prior research, expression modality has been shown to influence the content of a message or choice (Klesse, Levav, and Goukens 2015; Berger and Iyengar 2013). Compared to oral communication, written communication leads people to mention more interesting products, partly because communicators have more time to formulate what they say (Berger and Iyengar 2013). As such, one might expect a learned association such that consumers find written recommendations generally more persuasive than auditory recommendations. In fact, a pilot study in which participants were asked to recommend their favorite movie by either speaking or typing revealed that participants who typed their recommendations felt more persuasive ($M = 4.77$) than those who spoke ($M = 4.09$, $p < .001$).

Nevertheless, across 6 experiments (Total N = 3,900), we find the opposite: our results suggest that spoken recommendations are more persuasive. This finding is in line with other work regarding modality effects on recipients of communication. Prior research shows that speakers seem more competent, intelligent, thoughtful, and mentally capable than writers sharing identical information (Schroeder and Epley 2015; Schroeder, Kardas, and Epley 2017). Interestingly, we find that positive effects of auditory messages (compared to visual) extend beyond human voices to automated voices as well, as manifested in recipients' likelihood of following the communicator's recommendations.

Study 1 (N=379) revealed this main effect. Study 1 used a 2 (modality: auditory vs. visual) × 2 (source: Google or non-Google) between-subjects design. Each participant either heard (*auditory*) or read (*visual*) a recommendation for one option in eight different product categories and then had to make a choice among three options in each category, one of which was the recommended option. Participants in the *Google* conditions were told to imagine that they were using either a Google Home or a Google search engine to find a recommendation, depending on if they were in the auditory or visual conditions, respectively. Participants in the *non-Google* conditions were simply told to imagine that they were looking for a recommendation. In the *non-Google auditory* condition, recommendations were spoken by a human voice. In the *Google auditory* condition, recommendations were spoken using text-to-speech software, in which the software employs a robotic-sounding voice to read aloud text.

Results from a logistic mixed-effects regression analysis revealed a main effect of modality ($b = 0.63$, $SE = 0.12$, $p < .001$) such that auditory recommendations were more likely to be adopted than visual recommendations. Importantly, there was no significant interaction between mode and source on the likelihood of following the recommendation ($p > .70$); nor did we find a main effect of the source ($p > .40$). The main effect of modality remained significant when analyzing the *Google* and *non-Google* data separately (*Google*: $b = 0.58$, $SE = 0.17$, $p < .001$; *non-Google*: $b = 0.69$, $SE = 0.19$, $p < .001$).

In Study 2, we replicated the effect of modality. Study 2 (N=724) used a simplified design of 3 conditions: *auditory-human voice*, *visual-typed*, *visual-handwritten*. The purpose of the hand-

written condition was to humanize the recommender in the visual condition. We measured perceptions of the recommendation as coming from a human creator (adapted from Schroeder & Epley, 2016). Participants who heard recommendations spoken by a human were *more* likely to believe that the recommendations were created by a human than participants who read typed recommendations ($M_{auditory}$ = 6.35 vs. M_{typed} = 5.50, $p < .001$). However, participants who heard recommendations were *less* likely to believe the recommendations came from a human than those who read recommendations handwritten by a human ($M_{handwritten}$ = 6.88, $p = 0.02$). Nonetheless, auditory recommendations were followed more than both typed ($b = 1.69$, $SE = 0.20$, $p < .001$) and handwritten recommendations ($b = 1.10$, $SE = 0.20$, $p < .001$), thus providing evidence against perceived humanness of the recommender as a potential explanation for the effect.

Studies 3-6 replicated the main effect of modality using different stimuli and provided preliminary evidence that casts doubt on other mechanisms. In Study 3 (N=801), we manipulated the ease with which participants read or heard the recommendations by inserting blurriness or static into the recommendations; we found no interaction between ease and modality ($p > 0.10$), yet still found a main effect of auditory recommendations being adopted more than visual ($p = 0.04$). In Study 4 (N=599), we measured participants' memories of the recommendations prior to asking them their choices and found no differences in memory across modalities ($p > 0.10$); the main effect of auditory remained significant ($p = 0.02$). In Study 5 (N=807), we manipulated the source of the recommendation to be an expert or novice but found no interaction with modality ($p > 0.80$); the main effect of auditory remained significant ($p = 0.01$). In Study 6 (N=590), we manipulated the time at which the recommendation was generated to test for perceived relevance of the recommendation; we found the main effect of auditory recommendations ($p < .001$) but no interaction ($p > 0.70$). Ultimately, there seems to be a fundamental difference in the modalities of hearing and reading that leads people to adopt auditory recommendations more than visual ones.

This research illustrates the importance of auditory mediums and has profound implications for developers of voice assistants, highlighting the impact of integrating auditory recommendations into such systems.

Should I Give Siri my Credit Card? How Mode of Interaction Affects Willingness to Share Personal Information with Machines

EXTENDED ABSTRACT

Every day, people make decisions about whether to share their personal information with machines, from entering a credit card number into a company's website to allowing a phone to track one's location. How do people decide whether to share information? We explore how the modality by which people interact with machines can affect sharing behavior. Specifically, we consider two criteria—whether the user talks or types to the machine (i.e., expression modality) and whether the machine talks or types back (i.e., response modality).

Based on prior research, we expected that both expression and response modality could influence sharing behavior. First, expression modality has been previously shown to influence self-control behavior (Klesse, Levav, and Goukens 2015; MacLeod 1991; Paus et al. 1993). For instance, verbally expressing one's choice (i.e., speaking) increases heuristic decision-making and indulgence, thereby reducing self-control, compared to physically expressing one's choice (e.g., button pressing, pointing, typing) for identical self-control di-lemmas (Klesse et al. 2015). If speaking activates a more heuristic-driven mindset than other forms of engagement, then perhaps people will be quicker to share information—not thinking as carefully about whether or not it is a wise decision—when they speak to a machine.

Second, response modality has been shown to influence anthropomorphism. A machine that can create speech should be judged as more human-like than a machine that creates text. In one set of experiments, participants who read a statement that had been created by either a human or machine were less likely to believe the text had been written by a human than those who heard the same text spoken aloud (Schroeder and Epley 2016). Furthermore, self-driving cars with human voices seem more human-like and are trusted more by users (Waytz, Heafner, and Epley 2014).

To examine the effect of modality on sharing behavior, we conducted three field experiments in San Francisco and Chicago. All experiments used a similar procedure: Individuals were recruited to ostensibly test a new virtual assistant application in exchange for a food item. To do so, participants conversed with the application via different randomly assigned modalities (e.g., talking, typing) for about 5 minutes. They subsequently reported their evaluations of the virtual assistant and what information they would be willing to share with it.

We measured anthropomorphism in all studies (adapted from Bastian and Haslam 2010, e.g., "How intelligent did it seem?"; "How responsive did it seem?") and social engagement in Exps. 2 and 3 (e.g., "I felt engaged", "I felt like I was interacting with a real person"). We also measured how much participants "typically trust new technology" and "are familiar with using virtual assistants" and their demographic information. To examine our key hypothesis about sharing behavior, we asked participants whether they would be willing to share 12 different types of information (e.g., calendar, contacts, location, credit card, internet search history) with the application.

To select a virtual assistant, we examined all possible applications that 1) could talk or type, 2) could respond to voice or text, 3) would be relatively unfamiliar to participants so they would not have pre-existing opinions about it, and 4) seemed relatively humanlike (based on prior Turing Test competitions). The application that fit our needs was "Cleverbot," which uses algorithms to have realistic conversations. Cleverbot has held over 200 million conversations since it went online in 1997. In the national 2011 Turing Test competition, Cleverbot was judged to be 59.3% human, compared to the rating of 63.3% human achieved by human participants.

Experiment 1 recruited 416 respondents in one of eight conditions: 2 (user's expression modality: talk, type) × 2 (machine's response modality: talk, type) × 2 (machine's gender: male, female). We manipulated the machine's gender because some prior research indicates that people apply human gender stereotypes to machines (Nass, Moon, and Green 1997). Results revealed the predicted main effect of expression modality, $F(1, 402)=6.12$, $p=.014$, such that users who talked to Cleverbot shared more information than users who texted. This effect remained when controlling for comfort with new technology, familiarity with virtual assistants, user age and gender, and the survey evaluations, $\beta=.063$, $p<.05$. However, there were no effects of response modality, the machine's gender, or interactions between conditions, $Fs<1$. Surprisingly, there were also no effects of any condition on anthropomorphism, $ps>.065$.

Experiment 2 (N=110) used a simplified design of just two experimental conditions—user typing or talking—to conduct a replication of Experiment 1. Supporting the findings from Experiment 1, there was an effect of expression-modality on sharing behavior, $t(106)=3.42$, $p=.001$, even when controlling for user demographics

and survey evaluations. However, there were no effects on rated anthropomorphism or social engagement.

Finally, Experiment 3 (N=293) manipulated both expression and response modality (4 conditions). It revealed a weaker effect of expression modality than in prior experiments: non-significant although in the predicted direction: $F(1, 290)=1.93$, $p=.166$, and no effect of response modality or interaction, $ps>.250$. Across the three experiments in a meta-analysis, the aggregate effect of expression-modality was $t=.320$, $p<.01$.

These results raise many new questions for future research. First, why did we observe no effect of response modality? We suspect that a machine's voice may only be humanizing when it contains reasonably human-like paralinguistic cues (e.g., intonation). As preliminary support, users reported that Cleverbot's voice was not humanlike (below the scale midpoint). Second, how robust is the seemingly weak effect of expression modality, and would it apply to real decisions to share data? To test this, we are currently running two more pre-registered experiments in which participants actually decide whether or not to share their phone data with real virtual assistants installed on their phones.

Overall, despite the remaining questions, this work has the potential to shed light on key theoretical questions in psychology and human-computer interaction. Modern technology continues to integrate capabilities associated with artificial intelligence. How users interact with this technology can influence their likelihood of sharing their personal and sensitive information. Understanding these interactions is integral to guiding secure development and use.

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Influences of Numerical and Scale Formats on Judgments

Chair: Christopher J. Bechler, Stanford University, USA

Paper #1: Placing Value on Place Value: Numerical Precision Influences the Weighting of Ascending versus Descending Attributes

Jorge Pena Marin, University of Cincinnati, USA

Mathew S. Isaac, Seattle University, USA

Paper #2: Consumers Perceive That Whole-Number Average Ratings Reflect Less Variable Distributions

Christopher J. Bechler, Stanford University, USA

Jonathan Levav, Stanford University, USA

Joshua I. Morris, Stanford University, USA

Paper #3: The Commission Effect

Mathew S. Isaac, Seattle University, USA

Julio Sevilla, University of Georgia, USA

Rajesh Bagchi, Virginia Tech, USA

Paper #4: Left-Right or Top-Down? The Effect of Horizontal versus Vertical Scale Orientation on Consumer Judgments

Ellie Kyung, Dartmouth College, USA

Manoj Thomas, Cornell University, USA

Aradhna Krishna, University of Michigan, USA

SESSION OVERVIEW

Numbers are critical inputs in consumer decisions. Consumers evaluate products based on device specifications, average product ratings, promotions, and when responding to surveys on smartphones. How do consumers perceive and evaluate the numbers they encounter? And how does this process guide behavior?

This symposium's objective is two-fold. The first objective is to glean a better understanding of how people process numerical information. Combined, the papers explore not only the processing itself, but also how framing and situational factors can influence this processing. The second objective is to explore the practical consequences of these novel theoretical contributions.

Pena-Marin and Isaac and Bechler, Levav, and Morris open the session by discussing the incorporation of numerical precision into judgment. Pena-Marin and Isaac find that numerical precision influences how consumers weight attributes when making decisions because precise numbers are associated with reduction. Whereas precise numbers carry greater weight when consumers prefer lower values of an attribute (e.g., a tablet's price), less precise numbers (e.g., whole numbers) carry greater weight when consumers prefer higher values of an attribute (e.g., a tablet's wireless range). Relatedly, Bechler, Levav, and Morris reveal that when consumers encounter whole-number average ratings (i.e., less precise averages) they perceive these average ratings to come from less variable distributions than non-whole-number average ratings—even when this is statistically unlikely. This error in perception is a product of the representativeness heuristic and can affect consumer choice because consumers typically reject outcomes that they see as more variable.

Isaac, Sevilla, and Bagchi and Kyung, Thomas, and Krishna conclude the session by discussing effects of framing the same numbers in different ways. Isaac, Sevilla, and Bagchi examine how the framing of equivalent numerical compensation information—as a high rate on a low gross amount (e.g., 10% on a $10,000 sale) or a low rate on a high gross amount (e.g., 1% on a $100,000 sale)—can affect its evaluation. They find that the former is evaluated more favorably because employees rely more on the commission rate since it is easier to evaluate. Relatedly, Kyung, Thomas, and Krishna exam-

ine how the framing of a scale can affect scale point (i.e., numerical) responses, revealing that scales oriented vertically can lower evaluations compared to scales oriented horizontally. This finding has large marketing and research implications, as horizontal numerical scales on survey platforms (e.g., Qualtrics) are sometimes automatically reoriented to display vertically on mobile devices.

Combined, these four complete papers contribute to the fields of numerical cognition and consumer psychology in two ways. Theoretically, the session provides important answers to open questions about numerical processing. Practically, the session provides psychological insight into a wide array of instances in which we encounter numbers, including how consumers evaluate product attributes and mentally represent product ratings, how employees evaluate their compensation, and how people respond to surveys. We envision the questions posed and answered in this session will both further develop our understanding of numerical processing and spur innovative research in this influential area.

Placing Value on Place Value: Numerical Precision Influences the Weighting of Ascending versus Descending Attributes

EXTENDED ABSTRACT

When choosing from a product assortment, consumers often compare options on multiple product attributes (e.g., product weight, computing speed). More often than not, consumers may be forced to decide between products that are superior on different attributes. How do they make these tradeoffs? Research on information integration (e.g., Anderson 1981, 1982) suggests that consumers might assign a subjective value to each attribute and then weight these different attributes in some fashion to arrive at a product decision (e.g., by choosing the product with the highest importance-weighted utility).

We show that attribute weights are influenced by the level of precision of the numerical values that are used to describe the attributes themselves (e.g., 12.21 vs. 12). In particular, we find that consumers' preference for numerical precision differs for *ascending* versus *descending* attributes. Consistent with prior research (e.g., Gunasti and Ross 2010), we define ascending attributes as those in which higher numbers indicate greater value ("the higher, the better"), whereas descending attributes are those in which lower numbers denote greater value ("the lower, the better"). When considering a tablet computer, for example, processor speed is an ascending attribute because consumers typically derive greater utility when the numerical values representing processor speed (e.g., GHz) increase. On the other hand, product weight is a descending attribute because consumers derive greater utility when the numerical values representing product weight (e.g., pounds) decrease.

Drawing on past research on attribute weighting (e.g., Huber, Payne and Puto 1982; attribute compatibility (e.g., Nagpal and Krishnamurthy 2007; Nowlis and Simonson 1997), and numerical cognition (e.g., Dehaene 2011; King and Janiszewski 2011), we hypothesize that consumers will weight descending attributes more [less] heavily in their decision making if attribute information is more [less] precise. As a result, consumers considering the same assortment may make different choices when the precision of attribute information is varied. We further propose that this effect manifests because consumers mentally associate precise numbers with the concept of *reduction*, which in turn heightens the accessibility and perceived importance of

other reduction-oriented stimuli such as descending attributes (that improve as their numerical value is reduced).

Four studies provide support for our theorizing. In study 1A, 233 students were successively shown four reduction-related images and four expansion-related images (randomized) and asked to choose the one number that "goes better" with the image from two options. The two numbers ranged from 11 to 99.99, with one relatively less precise number (i.e., whole numbers with no decimal points) and one relatively more precise number (i.e., numbers with two decimal points) in each choice set. Participants selected the more precise number in 57.2% of the cases in which they encountered a reduction-related image. In contrast, they chose the more precise number only 34.4% of the time when they encountered an expansion-related image; χ^2 (1) = 97.13, $p < .001$. Study 1B was an Implicit Association Test (IAT, Greenwald, McGhee, and Schwartz 1998) in which 177 students' response latencies were compared when precise numbers were paired with reduction-related words (compatible) or with expansion-related words (incompatible). As expected, participants' responses were faster in the block in which the two categories were compatible ($M = 813.46$ ms, SD = 561.77) than the block in which they were incompatible ($M = 832.17$, SD = 634.46), which suggests that the concepts are cognitively linked.

In study 2, 293 students imagined that they were shopping for a pair of new wireless headphones and were concerned about two attributes: product weight (i.e., descending) and wireless range (i.e., ascending). Subsequently, they were presented with a set of three typical values for each attribute that varied in terms of numerical precision (less vs. more) and asked to estimate the relative weighting they would place on each attribute (1 = completely rely on product weight, 7 = completely rely on wireless range). Irrespective of whether the ascending attribute had a higher or lower magnitude than the descending attribute, we observed a main effect of numerical precision such that participants relied relatively more on the ascending attribute (i.e., product weight) when numerical values were less precise versus more precise ($M_{less\_precise} = 4.83$, SD = 1.30 vs. $M_{more\_precise} = 4.50$, SD = 1.46; $F(1, 289) = 4.19$, $p = .04$).

In study 3, participants chose one out of four tablet computer options that were described using an ascending attribute (consumer ratings) and a descending attribute (price). The values of consumer ratings and price were crossed so there was not a dominant option. We obtained a significant effect of numerical precision (Wald c^2 (1) = 8.37, $p < .01$) on choice. Participants were more likely to select one of the low-priced tablets in the high-precision condition (54.5%) versus the low-precision condition (40.2%). In contrast, participants were less likely to select one of the highly-rated tablets in the high-precision condition (45.5%) versus the low-precision condition (59.8%). We also created a reduction index ($\alpha = .93$) that captured the extent to which participants associated the numbers used to describe the tablet with expansion/contraction, growth/reduction, increases/decreases, and addition/subtraction. Mediation analysis showed that when numerical precision and the reduction index were used to predict tablet choices, the effect of numerical precision was no longer significant ($\beta = -.48$, SE = .29; $t(194) = -1.65$, $p > .09$). Instead, the reduction index ($\beta = .24$, SE = .14; $t(194) = 2.06$, $p = .03$) served as a significant predictor. When estimated using 10,000 bootstrapped samples, the indirect effect was found to be significant ($\beta = .10$, SE = .07), with the 95% confidence interval excluding zero [-.30 to -.01].

In sum, we contribute to research on numerical cognition that has previously shown that consumers infer quality (Schindler, Parsa, and Naipaul 2011), magnitude (Thomas, Simon, and Kadiyali 2010), and confidence (Welsh, Navarro, and Begg 2011) from numerical precision. We provide the first demonstration that numerical preci-

sion is also associated with the concept of reduction and that this association can systematically affect how consumers weight attributes and make decisions.

Consumers Perceive That Whole-Number Average Ratings Reflect Less Variable Distributions

EXTENDED ABSTRACT

Consumers routinely consult average product ratings to gather information about a product's quality (e.g., de Langhe, Fernbach, and Lichtenstein 2016). In addition to quality information, average ratings can also evoke beliefs about their distribution. The present research examines how the decimals associated with an average rating can influence consumers' perceptions of the variability in the ratings that make up that average. Specifically, we test whether "whole-number" average ratings (e.g., 4.00, 4.0, or 4 out of 5 stars) are perceived to have less dispersion than "non-whole-number" average ratings (e.g., 4.01, 4.10, or 4.11 out of 5 stars). Because consumers prefer certainty to uncertainty (i.e., less variability), these perceptions can cause consumers to purchase products that are objectively rated worse.

Importantly, given the ever-increasing ease with which consumers can rate items like books, employers, or travel guides, the number of product ratings that consumers typically encounter are quite high (e.g., Bank of America 2018; Goodreads 2018). When the number of reviews is high—say in the thousands—average ratings closer to the endpoints of the rating scale are statistically more likely to have smaller standard deviations than those closer to the midpoint. Thus, when the number of reviews is high, a 4.10-star average has smaller expected dispersion than a 4.0-star average.

Yet, despite this statistical property, we predict that consumers do not understand this relationship and perceive greater disagreement among the underlying ratings that comprise a non-whole-number average due to the representativeness heuristic. Computing the expected dispersion associated with a summary statistic is complex, and so consumers perform this judgment in part by automatically substituting the related task of assessing whether there is an individual rating that fits the average rating prototype. When such a match is present (e.g., an individual rating of 4 looks like the average 4.0), consumers expect more instances of that specific individual rating than otherwise, leading to perceptions of less dispersion in the distribution underlying the average.

Six experiments (total N=12,460) reveal consistent evidence of the hypothesized effect and demonstrate its consequences. Across the experiments, we employ three distinct dependent measures of perceived dispersion, demonstrating convergent validity. To aid in establishing a high level of ecological validity, we largely examine instances in which individual ratings must be whole numbers on a 5-star scale (Modus 2018) and focus on the comparison of 4.01, 4.10, and 4.11 ("non-whole-number") and 4, 4.0, and 4.00 ("whole-number") averages. Moreover, this comparison of whole-number and non-whole-number averages minimizes objective rating differences, and the predicted direction of our effect is not confounded by statistical likelihood (e.g., 2.00 vs. 2.01; expected dispersion is larger for 2.01) nor a "left-digit bias" (e.g., 1.99 vs. 2.00). Our effect is robust to the comparison of other whole-number and non-whole number averages on non-5-star scales, and still operates when these averages are accompanied by histograms displaying the actual individual ratings that make up the average.

Each experiment employed a similar study-design. Participants viewed 10-13 items in random order. Each item had a high and unchanging number of ratings (e.g., 1,333), but was randomly assigned a target (e.g., 4.00 or 4.1) or non-target average rating (e.g., 3.63).

Non-target ratings helped conceal the nature of the experiment from participants (40%-54% of the average ratings were non-target ratings across experiments) and are not discussed further.

In experiment 1, 1,495 MTurkers encountered 10 items (e.g., campus food, mutual fund, employer on Glassdoor) with randomly assigned average ratings. For each, participants constructed their perceived distribution of the ratings making up the average via a distribution builder (Andre 2016). Across all stimuli, participants constructed distributions with lower standard deviations for whole-number average ratings than non-whole-number average ratings, $t=-7.15$, $p<.001$. Providing initial evidence for our theorized representativeness mechanism, this effect was driven by an increase in the proportion of 4-star ratings that participants allocated to whole-number averages, $t=5.69$, $p<.001$.

Experiment 2 (1,519 MTurkers) replicated experiment 1 (perceived dispersion: $t=-4.18$, $p<.001$; proportion of 4-star ratings: $t=3.43$, $p<.001$) using 10 new items (e.g., car brakes, doctors). More importantly, participants indicated *higher* choice intentions when items were paired with whole-number average ratings (i.e., averages that were objectively *lower*; $t=2.97$, $p<.01$), and this effect was mediated by the standard deviations of the constructed distributions, $z=2.59$, $p=.01$.

Experiments 3A-3C illustrated the dispersion effect in a real-world context (Facebook advertisements) using another measure of perceived dispersion (consensus). In each experiment, participants encountered 13 Facebook advertisements for items (e.g., umbrella, veterinarian) with randomly assigned average ratings. Perceived reviewer consensus was higher for items with whole-number average ratings in experiment 3A (1,485 MTurkers; $t=6.38$, $p<.001$), experiment 3B (1,955 MTurkers; $t=9.45$, $p<.001$), and experiment 3C (2,998 Prolific participants; $t=17.18$, $p<.001$). Further, perceived consensus mediated participants' increased consideration of the items' rating when purchasing (3A: $z=5.35$, $p<.001$) and increased likelihood of clicking on the advertisement (3B: $z=7.23$, $p<.001$; 3C: $z=11.54$, $p<.001$).

Experiment 4 (3,008 MTurkers) provided additional evidence for the representativeness mechanism using a different measure of perceived dispersion (agreement). Prior to encountering 10 items from a bogus website, participants were randomly assigned to learn that reviewers on this website could rate products either using whole numbers or to one decimal point. This manipulated whether reviewers were able to select an individual rating (4.1) that fit the average rating prototype for a 4.10 average rating. Consistent with a representativeness account, participants perceived greater agreement for 4.10 average ratings than other non-whole-number averages when reviewers could rate products to one decimal point and a 4.1 rating was possible to be selected, but not when reviewers could rate products using whole numbers. Further, the difference in perceived agreement among reviewers between 4.00 and 4.10 average ratings was attenuated when reviewers could rate products to one decimal point and a 4.1 rating could be selected, $t=2.63$, $p=.009$.

Consumers perceive more from average product ratings than merely information about product quality. This research on how consumers mentally represent summaries of individual judgments extends a numerical cognition literature that largely focuses on the interpretation of individual numbers.

The Commission Effect

EXTENDED ABSTRACT

In addition to their fixed salaries, many employees- particularly salespeople- receive additional monetary compensation based on the sales they manage or generate. In fact, U.S. firms annually spend over $200 billion on variable sales force compensation and salespeople earn approximately 40 percent of their total pay as a result of sales-based incentives (Zoltners, Sinha, and Lorimer 2006).

A common compensation structure is the commission plan, in which a commission rate is multiplied by the gross sales attained by a salesperson to determine his/her monetary payout. For any single transaction, the same payout (e.g., $1,000) may be earned by a relatively high commission rate and a low gross sales amount (e.g., 10% commission rate on a $10,000 gross sale) or by a relatively low commission rate and a high gross sales amount (e.g., 1% commission rate on a $100,000 gross sale). The present research explores whether an identical monetary payout is evaluated differently in these two situations.

Although the principle of frame invariance (e.g., Arrow 1982; Kahneman and Tversky 1986) would expect evaluations to be unchanged in each situation, there are several reasons to believe that high gross sales amounts might produce higher evaluations. Prior work has noted that money is "physically and conceptually finite and tangible" since it can be touched, counted, and held in one's hand (MacDonnell and White 2015). Since commission rates are typically expressed as percentages and therefore less tangible, employees might be expected to rely more on their evaluation of the gross sales amount when judging their own dollar payout. This prediction is consistent with Monga, May, and Bagchi's (2017) demonstration of elicitation procedure compatibility.

In contrast to these alternatives, we predict that employees will rely more on their commission rate than the gross sales amount when evaluating a specific dollar payout. As a result, they will evaluate the same monetary payout more [less] favorably if it stems from a high [low] commission rate and a low [high] gross sales amount. The basis for this *commission effect* prediction comes from general evaluability theory (Hsee and Zhang 2010), which states that individuals rely more on attributes that are easy-to-evaluate independently when making isolated judgments (Hsee 1996). We propose that commission rates are easier-to-evaluate because they are bounded on both sides (0-100%). They are consequently *less* variable than gross sales amounts, which may potentially differ for each transaction. Five experiments document the commission effect and provide evidence that evaluability serves as an underlying mechanism.

In experiment 1, participants imagined being a salesperson who had either received a 20% commission on a $5,000 gross sale amount (high rate condition) or a 10% commission on a $10,000 gross sale amount (low rate condition). We also varied whether rate information was presented before or after the gross sales amount to test. Participants evaluated the attractiveness, size, and value of the dollar payout that they would receive for this specific transaction. Despite the dollar payouts being equivalent in all conditions, we found a main effect of commission rate magnitude ($F(1, 369) = 11.39$, $p = .001$, $\eta_p^2 = .03$), such that participant evaluations were higher in the high rate condition ($M_{high} = 6.19$ vs. $M_{low} = 5.59$); no order effects or interactions were observed.

Subsequent experiments employed the same basic paradigm, although the specific stimuli and numerical values varied by study. In experiment 2, we found that payout evaluations were higher when the commission rate was high versus low ($F(1, 401) = 5.56$, $p < .02$, $\eta_p^2 = .01$), even when the computed dollar payout was modestly higher in the low rate condition ($41.10 vs. 39.90). Experiment 2 also showed that the commission effect persisted irrespective of participants' numeracy and whether they had been explicitly instructed to calculate the dollar payout. Experiment 3 ruled out the concern that our prior results were due to different inferences about effort by asking participants to evaluate a *potential* commission plan rather

than a completed transaction (as in the prior studies). Even though at each tier of sales performance, participants in the high commission rate and low commission rate conditions would earn identical dollar payouts, the higher commission rate plan was nevertheless preferred ($F(1, 252) = 15.05$, $p < .001$, $\eta_p^2 = .06$).

Experiments 4 and 5 demonstrated the role of evaluability in producing the commission effect. Experiment 4 maintained our typical high rate (24% commission rate on a $2,000 sale) and low rate (12% commission rate on a $4,000 sale) conditions but included two additional conditions in which commission rates were both low in absolute terms, albeit still high (.024% commission rate on a $20,000 sale) or low (.012% commission rate on a $40,000 sale) relative to one another. Because they were both so low, we expected these two conditions to be indistinguishable when evaluated separately. Consistent with this prediction, we observed a significant interaction ($F(1, 264) = 4.31$, $p = .039$, $\eta_p^2 = .02$), such that the commission effect was replicated when comparing the first two conditions ($F(1, 264) = 10.80$, $p = .001$, $\eta_p^2 = .04$) but eliminated when comparing the low absolute commission conditions ($F(1, 264) = .22$, $p = .64$, $\eta_p^2 = .001$). Experiment 5 provided additional support for the proposed evaluability mechanism by showing that participants were more likely to use the less-evaluable gross sale amount when a reference point (i.e., the average gross sale amount) was included. We obtained a significant interaction effect ($F(1, 557) = 7.21$, $p < .01$, $\eta_p^2 = .01$), such that the commission effect was observed with no reference ($F(1, 557) = 11.98$, $p = .001$, $\eta_p^2 = .02$) but eliminated when the reference was included ($F(1, 264) = .17$, $p = .69$, $\eta_p^2 < .001$).

Taken together, these experiments provide robust evidence of the commission effect and implicate evaluability as an underlying mechanism. In addition to contributing to our understanding of numerical cognition, framing effects, and evaluability, this research provides actionable managerial implications for firms and managers that use commission plans to motivate and reward their employees.

Left-Right or Top-Down? The Effect of Horizontal versus Vertical Scale Orientation on Consumer Judgments

EXTENDED ABSTRACT

Managers and researchers widely use surveys to understand human behavior and preferences. Online platforms offer the option of orienting scales horizontally versus vertically as a design choices, or sometimes automatically default to a horizontal orientation for computer interfaces and vertical one for mobile interfaces. This automatic change in orientation is based on the assumption that orientation does not affect responses.

However, based on previous work demonstrating powerful implicit left-to-right numerical associations with magnitude (Dehaene 2001, 2003), which includes the tendency to anchor on the left-hand starting point and adjust to the right when using scales (Chan 1991) and work demonstrating that the human visual field is wider than it is tall (Deng et al. 2016; Kunnapas 1957; Morikawa and McBeath 1992), we predict that scales with vertical orientation will result in lower evaluations than those with horizontal orientation. More specifically we predict this is because people pay less attention to the endpoint of a scale when vertically versus horizontally oriented, and therefore adjust towards the endpoint less.

In experiment 1 (undergraduate students, $n = 159$) participants answered the five Deiner et al. (1985) Life Satisfaction Scale questions on either a horizontally or vertically oriented scale (1 = strongly disagree, 7 = strongly agree). A mixed ANOVA with orientation as a between subjects factor and life satisfaction question as a between subjects factor revealed a main effect of orientation ($F(1, 157)$ $= 5.32$, $p = .02$) and question replicate ($F(4, 628) = 25.29$, $p < .001$). The interaction between the two was not significant. Participants reporting being happier when using a horizontally ($M_H = 5.13$) versus vertically ($M_V = 4.70$) oriented scale.

Because experiment 1 utilized the Qualtrics spacing defaults (e.g. horizontal wide, vertical narrow), experiment 2 varied the spacing of the scales as wide versus narrow to test whether this is an implicit and associative effect versus one that is due to physical placement. mTurk participants ($n = 601$) completed the Lyubomirsky and Lepper (1999) Subjective Happiness Scale either horizontally or vertically oriented, with either wide or narrow spacing. A mixed ANOVA with orientation and spacing as between subjects factor and happiness questions as a between subjects factor revealed only a main effect of orientation ($F(1, 1191) = 4.21$, $p = .04$) and replicate ($F(2, 1194) = 55.58$, $p < .001$ and no other significant effects, suggesting that spacing cannot account for the effect.

Experiment 3 (mTurk panel, $n = 125$) tests for evidence of the Verticality Effect in a non-affective domain. Participants were shown before and after treatment photos by a silicone scar sheet with product information, then asked to judge how much better the scar looks after treatment on a 9-point scale (1 = not at all better, 9 = much better) with either horizontal or vertical orientation. Those using a scale with horizontal orientation ($M_H = 6.30$) judged the improvement as larger than those using a scale with vertical orientation ($M_V = 5.61$, $F(1, 123) = 5.73$, $p = .02$), even when shown identical photographs.

Our theorizing suggests that the effect of orientation stems from inattention to and adjustment towards the endpoint of the scale when vertically oriented. If this is the case, the Verticality Effect should be attenuated for judgments where the endpoint is less relevant (experiment 4) or where attention is drawn to the endpoint (experiment 5).

Participants in experiment 4 (mTurk panel, $n = 221$) were asked to indicate their purchase intention for 15 products in 3 products categories on a 7-point scale ("How likely are you to buy this product?", 1 = unlikely to buy, 7 = likely to buy) with either horizontal or vertical orientation. For each product, they were shown a product name, photograph, moto, and quality rating designated by an independent rating agency. For each product category, participants were shown a product with a quality rating of 1, 2, 3, 4, and 5 in order to ensure a distribution of responses across the range of the rating scale to test that the effect of orientation increases as the scale values increase to the right / bottom. As expected, participants' purchase intention increased for higher quality products ($F(1, 3092) = 1912.30$, $p <.001$). The interaction between quality level and orientation was significant ($F(1, 3092) = 8.55$, $p = .003$). Furthermore, contrasts at each quality level revealed that the effect of orientation increases as quality level increases and is strongest for quality levels 4 and 5 ($ps < .0001$).

If the effect of orientation stems from relative inattention to the scale endpoint when using vertical versus horizontal scales, then drawing more attention to the endpoint during judgments should attenuate the Verticality Effect. Because prior research has shown that people tend to first read and anchor on the left side of a scale (Chan 1991) and process numerical information on scales before verbal information (Tourangeau et al. 2007), reversing the numerical scale from 9-to-1 should attenuate the verticality effect by making the endpoint of the scale more salient by making it the visual starting point. Experiment 5 utilized the same stimuli as experiment 3, but added the additional factor of numerical direction of the scale that is either increasing (1-to-9) or decreasing (9-to-1). We predict that the effect of orientation will be attenuated for decreasing numerical direction. The results of the experiment revealed a significant effect of orientation ($F(1, 294) = 9.40$, $p = .002$) and an interaction between orientation and numerical direction ($F(1, 294) = 3.72$, $p = .05$). The effect of

orientation was significant with increasing numerical direction (M_H = 6.72 versus M_V = 5.85; 1-to-9, $F(1, 294)$ = 12.13, p = .0001), but not decreasing numerical direction (M_H = 6.21 versus M_V = 6.01; 9-to-1, $F(1, 294)$ = .42, p = .42). The results of this research demonstrate a robust and highly managerially relevant effect of orientation on consumer judgments while offering new insights in theory development for how visual perception and implicit associations can affect judgments.

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Word of Mouth: Emerging Insights and New Directions for Consumer Research

Chairs: Christopher J. Bechler, Stanford University, USA
Zakary L. Tormala, Stanford University, USA

Paper #1: Sharing Like a Boss: How a Consumer's Position in the Hierarchy Influences Word-of-Mouth Valence

Christilene du Plessis, Singapore Management University, Singapore

Michael Schaerer, Singapore Management University, Singapore

David Dubois, INSEAD, France

Paper #2: Choosing Targets: How Expectations of Qualitative Change Influence Word of Mouth

Christopher J. Bechler, Stanford University, USA
Zakary L. Tormala, Stanford University, USA
Derek D. Rucker, Northwestern University, USA

Paper #3: TMI: How and Why Personal Self-Disclosure Affects the Persuasiveness of Consumer Word-of-Mouth

Carter Morgan, University of Miami, USA
Zoey Chen, University of Miami, USA
Sara Loughran Dommer, Georgia Institute of Technology, USA

Paper #4: Word of Mouth: A Review and Directions for Future Work

Jonah Berger, Wharton School of the University of Pennsylvania, USA

SESSION OVERVIEW

Consumers are exposed to word of mouth (WOM) all the time. Yet, despite the prevalence of WOM in consumers' daily lives, and the clear importance of understanding the factors that both induce WOM and influence how it is perceived, the topic remains relatively understudied. What sender and recipient variables stimulate WOM and how do these variables affect WOM content? How can WOM content influence how it is perceived? Three talks provide cutting edge insights to answer these and other questions. A fourth review talk synthesizes recent work in the space and outlines fruitful directions for future research.

The session opens with a paper by **Du Plessis, Schaerer, and Dubois**, which identifies a characteristic of WOM senders and recipients (hierarchical rank) that affects the content of the messages that consumers share. They find that consumers share less positive messages with recipients below them in the hierarchy because they have less desire to connect with these lower ranked recipients. **Bechler, Tormala, and Rucker** follow up with a related paper which identifies a recipient characteristic (attitude position) that stimulates WOM, finding that consumers prefer to direct persuasion efforts toward individuals whose attitudes could change qualitatively (e.g., from negative to positive) rather than non-qualitatively (e.g., from positive to more positive) because this type of attitude change is perceived as greater and is inferred to have more impact on the recipients' subsequent behavior.

The session then shifts toward a discussion of the WOM content itself. **Morgan, Chen, and Dommer** investigate how the disclosure of intimate personal information influences the perceived value of WOM, discovering that WOM value is reduced when reviewers share intimate personal details because revealing these details is perceived to be socially inappropriate. Those who share intimate personal information when reviewing a product are less liked and their reviews are less persuasive, decreasing product purchase likelihood.

Last, keeping with the conference theme of "Becoming Wise" and highlighting "the aggregate wisdom" in the WOM domain, **Berger** concludes the session with a review of research in this area. He will synthesize past WOM research with the novel insights from the papers presented earlier in the session, provide a framework to organize these existing findings, and discuss directions for future WOM research.

Collectively, these talks further our understanding about a growing area of consumer research: WOM. Theoretically, this session is important because it represents an early step towards understanding something that is extremely prevalent in consumers' lives, but researchers still know little about. Practically, this session is important because it provides psychological insight into a wide array of WOM behaviors, such as WOM within social hierarchies, WOM with persuasion intentions, and WOM in product review contexts. The questions posed and answered in the session will expand and synthesize our understanding of the factors that induce WOM and influence how it is perceived, and hopefully spark new research on this important topic.

Sharing Like a Boss: How a Consumer's Position in the Hierarchy Influences Word-of-Mouth Valence

EXTENDED ABSTRACT

Understanding WOM is crucial because brand success often depends on the type of information people share. Particularly important to marketers is understanding what causes consumers to share positive or negative information, as WOM valence plays a crucial role in the success or failure of products and services (Chevalier & Mayzlin, 2006). One important factor that shapes WOM valence is with whom consumer are communicating (Berger, 2014). Empirical research has established two important audience characteristics that affect WOM valence: tie strength and audience size. Past research shows that people share more positive information when communicating with strangers than with friends (Dubois, Bonezzi, & De Angelis, 2016; Chen, 2017) as well as with larger (vs. smaller) audiences (Barasch & Berger, 2014).

Although tie strength and audience size are important, we propose a third dimension that can explain when consumers share more positive or negative information: the *hierarchical relationship* between WOM senders and recipients. Social hierarchies, defined as "an implicit or explicit rank order of individuals or groups with respect to a valued social dimension" (Magee & Galinsky 2008, p. 354), permeate almost every aspect of society, and, as a result, people often share WOM with individuals that occupy higher or lower relative rank. Indeed, in a survey of 255 working adults, we found that 90.2% regularly engage in WOM at work – an inherently hierarchical environment.

Given the prevalence of WOM in hierarchies, we investigate *whether*, *when and why* the hierarchical relationship between a WOM sender and recipient influences WOM valence. We propose that consumers share less positive messages with lower (vs. equal or higher) rank recipients. Because higher-ranked people have an increased ability to control their own and others' outcomes, they are less dependent on others (Fiske, 1993). Consequently, higher-ranked people have lower desire to affiliate with those below them in the hierarchy (Lammers, Galinsky, Gordijn, & Otten, 2012) and may

even actively engage in distancing behaviors (Earle, Giuliano, and Archer 1983). Since sharing positive information facilitates interpersonal closeness (Brissette, Scheier, & Carver, 2002), and people share positive information to foster social connections (Bell, 1978), we predict that senders will share less positive WOM with recipients who are lower (vs. equal or higher) in rank.

In Study 1 (*n*=393), participants watched an animated short film and either wrote down their thoughts about the film (baseline condition), or what they would say about it to their peer (equal-rank condition), supervisor (low-rank condition), or subordinate (high-rank condition). We created a positivity index by subtracting the number of negative attributes from the number of positive attributes. Participants in the high-rank condition sent less positive messages (*M*=.82, *SD*=2.15) than participants with low rank (*M*=1.54, *SD*=2.14), $F(1,391)$=4.55, *p*<.05), baseline participants (*M*=1.58, SD=2.82, $F(1,391)$=5.19, *p*<.05), and participants in the peer condition (*M*=1.68, SD=2.27, $F(1,391)$=6.32, *p*=.01).

Study 2 tested the consequences for message reception. In Part 1, participants (*n*=35) read a description of car and wrote a message about it to a colleague ranked lower (vs. higher) to them in their team. In Part 2, participants (*n*=358) read one of the messages from Part 1 and indicated how much they would pay, how willing they are to buy, their intention to inspect and their attitudes towards (α=.96) the car. They also indicated their intention to contact the seller. Multi-level mediation analyses with sender rank as independent variable (1=higher-rank sender, -1=lower-rank sender), and WOM valence as mediator, revealed a significant and negative indirect effect of sender rank on recipients' willingness-to-pay (*ab*=-.32, *S.E.*=.17, 95% LLCI=-.73, ULCI=-.08), willingness-to-buy (*ab*=-.40, *S.E*=.19, 95% LLCI=-.81, ULCI=-.11), intention to inspect (*ab*=-.38, *S.E*=.19, 95% LLCI=-.77, ULCI=-.08), intention to contact seller (*ab*=-.35, *S.E*=.17, 95% LLCI=-.73, ULCI=-.08) and product attitudes (*ab*=-.39, *S.E*=.17, 95% LLCI=-.75, ULCI=-.12), through WOM valence.

Study 3 tested our proposed mechanism in a competing mediation model. Participants (*n*=203) were randomly assigned to a high or low rank condition. We also measured need for affiliation (α=.85), felt responsibility toward interaction partner (α=.91), and role expectations (*r*=.44, *p*<.001). Replicating previous studies, participants in the high-rank condition (*M*=.55, *SD*=2.26) wrote less positive messages than participants in the low-rank condition (*M* = 1.19, *SD*=2.03), *t*(201)=2.15, *p*<.05). Importantly, the competing mediation revealed a significant indirect effect through need for affiliation (*ab*=-.11, *SE*=.05, 95% LLCI=-.24, 95% ULCI=-.03), but not through responsibility (*ab*=.003, *SE*=.02, 95% LLCI=-.02, 95% ULCI=.06), or role expectations (*ab*=.003, *SE*=.03, 95% LLCI=-.05, 95% ULCI=.06).

In Studies 4-5 we provide additional process evidence by manipulating need for affiliation. In Study 4, participants (*n*=472) watched a short film and wrote down what they would say about it to their supervisor (low-rank condition) or subordinate (high-rank condition). A third condition was included in which participants were instructed to write a message to their subordinate but were told that the goal of writing their message was to bond with the recipient (high-rank + affiliation motive condition). Participants in the high-rank condition wrote less positive messages (*M*=.93, *SD*=1.99) than participants in the low-rank condition (*M*=1.47, *SD*=1.90), $F(2,469)$=6.72, *p*<.01), but not when their affiliation motive was activated (*M*=1.65, *SD*=1.66), $F(2,469)$=.80, *p*=.37). There was no difference in message positivity between the low-rank and the high-rank + affiliation conditions, $F(1,310)$=0.86, *p*=.35.

In Study 5, we varied need for affiliation by manipulating whether senders expect to interact with the recipient in the future. In interactions where people expect to depend upon one another in the future (vs. not), the need to affiliate increases (Danheiser & Graziano, 1982). Participants (*n*=394) again watched an animated short and were then randomly assigned to a 2(rank: lower, higher) x 2(expect future interaction: no, yes) between-subjects design. Supporting our hypothesis, when senders did not expect to interact with the message recipient in the future, those with higher rank sent less positive messages (*M*=.41, *SD*=1.91) than those with lower rank (*M*=1.12, *SD*=2.13, $F(1,393)$=5.54, *p*<.05). When senders expected to interact with the message recipient in the future, there was no difference in WOM valence, $F(1,393)$=.04, *p*=.84.

Jointly, these studies contribute by identifying a novel sender characteristic that influences WOM content (hierarchical rank) and suggest that the need for affiliation is a key driver of positive WOM.

Choosing Targets: How Expectations of Qualitative Change Influence Word of Mouth

EXTENDED ABSTRACT

Imagine a word of mouth (WOM) campaign designed to enhance consumers' attitudes toward some brand, product, policy, or political candidate. Would it be better to target people like Consumer A, who would shift her attitude from very negative to just slightly negative, Consumer B, who would shift her attitude from slightly negative to slightly positive, or Consumer C, who would shift her attitude from slightly positive to very positive? WOM is an increasingly important topic in consumer research, and in the attitudes and persuasion domain more specifically. In attitudes and persuasion research, multiple recent investigators have turned their attention from identifying the factors that drive attitude change to those that stimulate WOM, advocacy, and the motive to persuade others. However, one question this growing body of work has yet to address: How do people select the targets of their messages? To whom do people prefer to send WOM or other persuasive appeals?

This research examines how the type, or nature, of attitude change senders expect to observe drives their target selection. One possibility, *the null hypothesis*, is that WOM senders are essentially indifferent about the type of attitude change their messages induce. For example, if they believe they can cause 2 points of attitude change on a 9-point scale, they may care little about where on the scale that change occurs. If true, we might expect WOM senders to show no preference among Consumers A, B, and C as potential persuasion targets. Alternatively, an *attitude strength hypothesis* (Petty and Krosnick 1995) might predict that senders would prefer to target consumers like A or C, because those consumers would shift in attitude extremity. Attitude extremity is a central dimension of attitude strength and changes in attitude strength can cause changes in behavior. Therefore, Consumers A and C might be perceived as experiencing, and indeed might actually experience, the most meaningful behavior change if targeted.

Although these hypotheses have merit, we propose the *qualitative change hypothesis* and posit that WOM senders prefer to target people like Consumer B, because those consumers' attitudes shift across a neutral threshold from one valence to another. People perceive qualitative attitude change (i.e., changes in valence; e.g., from negative to positive) as greater than otherwise equivalent non-qualitative change (i.e., changes *within* valence; e.g., from positive to more positive), and as a result infer that targets changing qualitatively will exhibit greater behavior change (Bechler, Tormala, and Rucker 2019). The current research investigates whether this shapes the manner in which people select persuasion targets.

In Experiment 1, 201 MTurkers read that they could attempt to change one of three consumer's minds about a policy that they supported. On a scale from "0-extremely opposed" to "100-extremely in favor," with 50 being neutral, participants could shift the attitude of the consumer they targeted by 16 points in favor of the policy. Of the three consumers, two would change non-qualitatively and the other would change qualitatively. More specifically, targeting Joe would shift his attitude from "pretty opposed" (21) to "less opposed" (37), targeting Jim would shift his attitude from "somewhat in favor" (53) to "more in favor" (69), and targeting Jack would shift his attitude across from "somewhat opposed" (47) to "somewhat in favor" (63). Thus, Jack would shift qualitatively whereas Joe and Jim would shift non-qualitatively. Participants overwhelmingly selected Jack as the target of their message (67.2% of participants, χ^2=23.69, p<.001). We replicated this finding in two supplemental experiments (total N=602) modifying the attitude scale used, the direction of the attitude change, and the location of the change on an attitude scale.

In Experiment 2 (N = 597 MTurkers), we tested our mediational account for why WOM senders prefer to target those whose attitudes would change qualitatively. Participants imagined that they coordinated a campaign for a political candidate and had a persuasive message that could shift voters' attitudes toward the candidate by 12 points on a scale ranging from -50 (strongly opposed) to +50 (strongly in favor), with a neutral midpoint of 0. Participants were shown the current attitude of one particular voter, and that attitude was manipulated between-subjects. In the two non-qualitative change conditions, the voter's attitude was expected to move from negative to less negative (-18 to -6) or from positive to more positive (+6 to +18) upon receiving the message. In the qualitative change condition, his attitude would shift from negative to positive (-6 to +6). Participants were more likely to target people like this voter the expected attitude change was qualitative as opposed to non-qualitative, ps<.001. This effect was serially mediated by the perceived magnitude of attitude and subsequent behavior change (95%CI=[.10, .20]).

In Experiment 3, 401 MTurkers read they were helping a social advocacy group choose between one of two market segments to target with an advertisement about a policy. Whereas all participants saw the same two segments (Segment A was initially slightly against [4 on a 9-point scale]; Segment B was initially slightly in favor [6 on a 9-point scale]), the strength of the advertisement was manipulated between-subjects such that it would move the segment +2 points or +0.5 points on the 9-point scale. Thus, whereas targeting Segment B would result in non-qualitative change in both conditions—as would targeting Segment A when the advertisement strength was +0.5 points—targeting Segment A when the strength was +2 points would result in qualitative attitude change. Results indicated that participants were more likely to target Segment A when the advertisement strength was +2 points and induced qualitative attitude change, χ^2=5.10, p=.024.

In sum, WOM senders demonstrate a preference to persuade targets who are expected to shift their attitudes qualitatively, because WOM senders perceive this attitude change as larger and as having greater implications for subsequent behavior. These findings shed light on an important factor that determines how people select persuasion targets, which has been largely overlooked in the WOM and persuasion literature. They also expand our understanding of attitude change perceptions, which has been relatively neglected in past research on attitudes and persuasion.

TMI: How and Why Personal Self-Disclosure Affects the Persuasiveness of Consumer Word-of-Mouth

EXTENDED ABSTRACT

In online reviews, reviewers often self-disclose personal information along with their product experiences. Conventional wisdom suggests that adding a personal touch via disclosure might make a review more helpful. Research in interpersonal relationship shows that sharing personal information brings people closer together and induces liking (Collins and Miller 1994). Persuasion research shows that liking of the speaker induces greater persuasion (Roskos-Ewoldsen and Fazio 1992). However, does this apply to online reviews? Does reviewers' sharing of personal information increase review usefulness?

We posit that one important way the online review context differs from previous work (that shows a positive effect of personal disclosure) is that review platforms are typically filled with strangers. In contrast to interactions with friends – where personal disclosure is desired and appropriate (Collins and Miller 1994) – interactions with strangers tend to stay at the surface, where the sharing of intimate personal information is often seen as socially inappropriate (Aron et al. 1997; Chaikin and Derlega 1974). As a result of this norm violation, readers are likely to dislike reviewers who disclose personal information and find their reviews to be less persuasiveness (i.e., usefulness). These ideas are tested and confirmed across four studies.

Study 1 examines the effect of reviewer intimate personal disclosure (PD) on review persuasiveness, examining nearly 1,000 reviews for electronic devices (e.g., Kindle) from Amazon.com. To capture PD, we use Linguistic Inquiry and Word Count (LIWC; Pennebaker et al. 2015), creating a measure for usage of words related to the 'Personal Concerns' category (e.g., work or money) within the review text (higher values indicate higher usage and more PD). According to LIWC, 'Personal Concerns' encapsulates reviewer-focused information, providing a suitable means to measure PD. To capture review persuasiveness, we counted the number of "yes" votes a review receives when readers are asked "was this review helpful to you." Given the count variable DV, a Poisson regression (with log-link function) analysis revealed a significant negative relationship between the number of helpful votes and PD (β = -.005, p < .001). Using a real-world dataset, study 1 demonstrates that PD adversely affects persuasiveness.

Study 2 replicates study 1 in a lab setting. We showed participants the same restaurant review, and manipulated whether the review contained or did not contain PD in the beginning. Importantly, we address a potential alternative explanation. Since consumers are limited in their processing resources (Petty and Cacioppo 1984), PD placed at the beginning of the review may preclude readers from seeing key product-relevant information that appear later. To address this possibility, we also added a condition where PD appeared at the end of the review. If it is social impropriety, as we argue, PD position should not matter; however, if results are due to preclusion of relevant information, then the effect should be attenuated when PD appears at the review's end. As such, participants were randomly assigned to one of three conditions (review type: no PD vs. PD-beginning vs. PD-end) where review usefulness served as the DV. Both reviews with PD (M_{PD}=5.39) were less useful than the no PD review (M_{noPD} = 6.02; p < .001). Critically, no difference emerged between the PD reviews ($M_{beginning}$=5.42 vs. M_{end} = 5.36; p= .77).

Study 3 illuminates the underlying process while also addressing additional potential alternative explanations. Our theory predicts a serial process whereby consumers 1)view reviewers' PD as socially inappropriate, 2)thus lowering reviewer likeability, thereby

3)reducing interest for the reviewed product. However, one could argue that PD operates in two alternative ways – by reducing the perceived relevance of the review or by reducing perceived similarity to reviewer (e.g., readers think they are dissimilar to those who disclose personal information). Study 3 tests our underlying mechanism via mediation along with these alternative processes. Participants read a review for a blender with (vs. without) PD (e.g., embarrassment with weight), while holding constant all other information. Participants rated their purchase likelihood and attitude towards the blender (composite DV; $r = .87$, $p = .01$). Participants assessed review appropriateness across three items ($\alpha(3)=.94$): 1) socially proper, 2) appropriate amount (of PD), and 3) appropriate inclusion (of PD, 1=not all appropriate, 7=very appropriate). To address alternative explanations, participants also rated relevance of the review as well as perceived similarity to the reviewer. Results revealed that participants had marginally higher attitude and purchase intention when shown the review without PD than the review with PD ($M_{No\ PD} = 4.74$ vs. $M_{PD} = 4.30$; $p = .079$). Using PROCESS model 81 (Hayes 2018), we tested and found a signficiant serial mediation model ($\beta = -.26$, 5000 BS 95% CI[-.4546, -.1049]) showing that the PD (vs. no-PD) review was seen as inappropriate, thereby reducing reviewer likeability, and lowering attutide and purchase likelihood for the reviewed product. These results held after controlling for the effect of relevance and similarity.

If PD negatively affects review persuasion because of norms violation, then for product categories where sharing personal information is expected and socially appropriate (e.g., high-intimacy products such as personal medications [preparation-H]), the negative effect of PD might be attenuated. We investigate this in study 4 using a secondary dataset from Amazon.com (N = 1,997 reviews). We expected to replicate our effect in low-intimacy products (e.g., statistics textbooks) but that this should be attenuated in high-intimacy products (e.g., self-help books). We used the same IV (LIWC's 'Personal Concerns' words) and DV from study 1. A Poisson regression (log-link function) revealed a significant interaction between product category (low vs. high intimacy) and the use of personal concern words ($\beta_{int}= .028$, $p < .001$). As predicted, the negative effect of PD is present for low-intimacy products ($\beta= -.03$, $p < .001$) but attenuated for high-intimacy products ($\beta= -.002$, $p= .583$), suggesting that norms for high-intimacy products attenuate PD's negative effect on review persuasiveness.

This work extends WOM research, showing that PD can ironically reduce review persuasiveness, and identifying reviewer self-disclosure as an important factor in WOM. These findings further contribute to a budding research stream examining the joint effect of linguistic content and judgement of reviewers on WOM persuasiveness.

Word of Mouth: A Review and Directions for Future Work

EXTENDED ABSTRACT

Word of mouth is frequent. People share stories with friends, information with colleagues, and recommendations with neighbors. They talk about whether a restaurant was good, a movie was engaging, and a new product lived up to the hype. The emergence of social media and online reviews has only increased the frequency and breath of consumer conversations.

Would of mouth is also important. The attitudes, preferences, recommendations, and mentions of others have an important impact on consumer behavior. Positive reviews increase book sales. Colleague recommendations increase adoption of pharmaceutical drugs.

And by some estimates, word of mouth has more than twice the impact of traditional advertising.

But while the importance of word of mouth is clear, less is known about why people talk about and share some things rather than others. Why do certain products get more word-of-mouth? Why do certain rumors spread faster than others? And why does certain online content go viral? How does the audience people are communicating with, as well as the channel they are communicating through, impact what gets shared? How does the dynamics of back and forth word of mouth truly evolve? Why do some conversations last longer and what drives topic switching?

To help build wisdom in this area, this talk will address these, and related questions, as it integrates various research perspectives to shed light on the behavioral drivers of word-of-mouth. It provides an integrative framework to organize research on the causes and consequences of word-of-mouth and outlines additional questions that deserve further study.

First, the talk will review prior work in the space, and talk about how it has evolved over time. Berger (2014) argued that interpersonal communication is goal driven and serves five key functions. These include:

1. Self-Presentation,
2. Emotion Regulation
3. Information Acquisition
4. Social Bonding
5. Persuading Others

Further, building on prior work the paper argued that who talks, to whom, about what, through which channel, with what effect, was a useful framework to organize existing work and drive further work in the space.

In the years since this paper was published through, there have been dozens of new findings and results. The talk will start with the prior framework, integrating new findings and pointing out places where they support, or refute, prior hypotheses. Further, this second generation of word of mouth research has begun to more deeply examine moderators, shedding light on how various motives combine to shape what people share, and how who people are talking to, and the context in which they are sharing, shapes transmission.

Second, the talk will outline some areas that seem particularly fruitful for further research. One interesting direction is conversational dynamics. Almost all existing research on word of mouth involves a single transmission occasion. Whether some news articles get shared more than other of whether someone talks about a specific product or service in a single outbound message to another person. But while such simplistic analyses have provided a variety in important findings, they lack the depth of most real world interpersonal communication. When someone texts, calls, or talks to someone else, they don't just share one thing. They share a variety of things as part of a larger back and forth conversation.

How do such dyadic, dynamic conversation shape word of mouth? What topics do people tend to start with and how do conversations evolve from one topic to the next? What leads some topics to last longer than others and how do characteristics of the communicators, and their similarity, shape topic length? What drives topic death and conversational closure? These are only a small handful of the interesting questions available for consumer behavior researchers to study. I'll mention some of my own preliminary data in this space (how similarity shapes topic evolution and concreteness shapes topic death) as well as some emerging work from a variety of other labs.

Another interesting direction is the importance of language. While a good deal of work has examined what people talk about, there has been less attention to how they talk about it. But an emerg-

ing stream of work has begun to highlight how subtle differences in language can both signal things about the sharer (and their attitudes) and shape consumer behavior.

Finally, I'll briefly mention the emergence of automated textual analysis. Rather than having to ask people whether they would share something in the lab, researchers can now better examine real social transmission in the field. These tools open up a range of exciting areas for further study.

In sum, what we know about word of mouth is clearly dwarfed by what we don't. That said, this talk will attempt to review what we do know, provide a framework to organize existing research, and outline potential directions for future work in the area.

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Wise and Foolish Consumer Financial Decisions

Chair: Kellen Mrkva, Columbia University, USA

Paper #1: A Structural Test of Mental Accounting and Consumer Fungibility From Credit Card Expenditures

Nicholas Pretnar, Carnegie Mellon University, USA
Christopher Olivola, Carnegie Mellon University, USA
Alan Montgomery, Carnegie Mellon University, USA

Paper #2: Minimum Payments Alter Debt Repayment Strategies Across Multiple Credit Cards

Abigail Sussman, University of Chicago, USA
Samuel Hirshman, University of Chicago, USA

Paper #3: Searching, Fast and Slow: How Time Preferences Influence Credit Card Search and Choice

Kellen Mrkva, Columbia University, USA
Elizabeth C Webb, Columbia University, USA
Eric J Johnson, Columbia University, USA

Paper #4: An Under-Shooting Bias in Asymmetric Resource Problems

Christopher Hsee, University of Chicago, USA
Xilin Li, University of Chicago, USA
Ying Zeng, University of Chicago, USA
Alex Imas, Carnegie Mellon University, USA

SESSION OVERVIEW

Americans hold over $800 billion in credit card debt. The average cardholder owns four credit cards, often with high interest rates that can cause debt to spiral out of control. Some people even hold high-interest credit card debt and savings simultaneously, a tendency called "the credit card debt puzzle," which can be extremely harmful. Understanding how consumers use credit cards and the processes that lead consumers to accumulate excessive debt is of paramount importance. The difference between wise and foolish decision making in this high-stakes domain can be the difference between financial security and financial turmoil.

How do consumers pick among the many credit cards available to them? How do people determine which debts to pay off first? What factors make people more likely to pay off debt?

The papers in this session will help answer these questions. In so doing, they will advance the field's understanding of consumer financial decision making, as well as our understanding of the heuristics, biases, and strategies people use more generally. Though the talks focus on consumer financial decision making and credit card decisions in particular, there is also a diversity of topics that will make this symposium interesting to a broad audience.

In the first paper, Olivola, Pretnar, and Montgomery use data from a large North American bank with over 3 million observations to examine factors that help or harm consumers' ability to make debt repayments. They show that some factors, including whether consumers buy a durable rather than non-durable good, impact debt balances long-term.

In the second paper, Hirshman and Sussman demonstrate that minimum payments can interfere with people's ability to make wise debt repayment decisions. Minimum payments make people less likely to choose the optimal strategy of paying off debt from higher-interest credit cards first, even though most people are aware that paying off high-interest debt first is the best strategy.

In the third paper, Mrkva, Webb, and Johnson focus on how people choose a credit card. They find that impatient, present-biased individuals are less willing to search for the optimal credit card, which causes them to choose cards that accumulate higher fees. Finally, Hsee, Li, Zeng, and Imas examine how people allocate money when there are multiple accounts, some with more resources than others. They find that people allocate too much toward smaller accounts.

The potential audience for this session is broad. Though the talks focus on consumer financial decision making and credit cards, it will be interesting to many. For example, three of the papers cover a novel heuristic or bias in decision making, several are rooted in behavioral economics, several use big data, some focus partly on time preferences and intertemporal choice, two have clear policy implications, one examines consumer search and information processing, and one has direct relevance for researchers who study perspective-taking and economic games.

All talks are based on papers in the **late stages of development**. All four papers are either currently being prepared or will soon be prepared for submission to A journals.

A Structural Test of Mental Accounting and Consumer Fungibility from Credit Card Expenditures

EXTENDED ABSTRACT

The theory of mental accounting suggests that consumers treat different sources of money and different expenditures differently (Thaler 1999). One implication of mental accounting is that consumers may be more likely to spend with credit cards than with cash or debit (e.g., Prelec and Simester 2001), particularly for durable goods purchases (Prelec and Loewenstein 1998). Under this theory, increasing the credit limit on a consumer's credit card should increase his/her consumption, regardless of whether his/her income or wealth also increased.

We test this prediction using a unique dataset of linked credit and debit card users. Our analysis adds to the literature on mental accounting theoretically, by deriving a measure of fungibility with regards to credit and debit card usage directly from a consumer's structural consumption/savings problem. It also adds to previous theorizing empirically by using linked household credit/debit card field data from a large North American bank to show that consumers behave in ways consistent with mental accounting.

We construct a theoretical, economic utility maximization model that allows different consumers to exhibit different degrees of fungibility. Specifically, we incorporate the mental accounting concept of partitioned ex-ante and ex-post budgeting by splitting the household budget constraint into separate constraints for each liquidity category and then allowing consumers to choose shares of consumption for different commodities out of different liquidity sources. Specifically, we focus on credit card verses debit card expenditure, though the model is general enough to admit many more liquidity sources by simply adding a new constraint. Among other things, the model reconciles a heretofore unsolved problem in mainstream economics known as "the credit card debt puzzle," wherein consumers simultaneously save and carry interest-bearing credit card debt (see Telyukova 2013; Telyukova and Wright 2008). Depending on individual consumers' innate aversion to holding debt, an individual may or may not simultaneously save and carry interest-bearing debt. This preference-based explanation allows us both to solve the puzzle and reconcile the vast degree of heterogeneity observed in the data with regards to savings and debt-accumulating behavior.

Using the equilibrium fungibility condition, we empirically test whether the median consumer unit (i.e., household) in our sample exhibits perfect fungibility with respect to credit and debit card expenditure. We find that the median consumer behaves as if receiving $1 in additional credit is equivalent to receiving $2.03 in additional cash in terms of marginal consumption value. A statistical test shows that the median consumer is thus significantly non-fungible with regards credit verses debit card expenditure. However, the distribution of this trait varies substantially across consumers: 59% of our sample behave as if the consumption value of credit is higher than that of cash, whereas the other 41% behave in the opposite manner.

Our structural model of fungibility can be used to better understand how consumers across the joint income, wealth, and debt distribution respond to exogenous credit and income shocks. For example, in counterfactual simulations, we can quantify how consumers who exhibit a pronounced aversion to accumulating credit card debt respond to unexpected, adverse income shocks. Being more sensitive to debt accumulation, the model predicts that such consumers will adjust their overall consumption downward to avoid accumulating too much debt. On the other hand, a consumer unit that is not debt averse may excessively smooth their consumption in response to a negative income shock by taking on more debt to ensure that their level of consumption, and thus standard of living, remains fairly consistent over multiple periods.

Additionally, we affirm the theory of Prelec and Loewenstein (1998), that consumers are more apt to use credit cards for durable goods purchases than non-durable goods purchases, because the pain of continually paying down accrued interest on debt is offset by the stream of utility they continue to enjoy from using durable goods. Specifically, we find that the median consumer unit in our sample (of over 10,000 households) responds to a $1 increase in credit by spending $0.32 more on durable goods than if s/he received the same $1 increase in available cash. For non-durables, by comparison, this effect is less pronounced in magnitude (only $0.05 more), though still significantly greater than zero. Our empirical results are consistent with a similar analysis on U.K. credit card users (Quispe-Torreblanca et al. 2019). Altogether, our results both bolster previous theorizing on mental accounting and build on this theory. Our results provide a clearer picture of how people mentally represent increases in credit, cash, and debit, and how people mentally represent their expenditures across different categories. Our data also afford a powerful tests of mental accounting using a large and unique dataset of credit and debit card usage from a large North American bank.

Minimum Payments Alter Debt Repayment Strategies Across Multiple Credit Cards

EXTENDED ABSTRACT

Americans hold an increasing amount of revolving credit card debt, currently estimated at $808 billion (Federal Reserve Bank of New York 2017), on an average of four cards per cardholder (CFPB 2015). A growing body of literature suggests people do not repay their debt in the cheapest possible way (e.g., Ponce et al. 2017). Prior work explains suboptimal repayment through lack of interest rate knowledge (Seira et al.2017) or through a variety of heuristic strategies inconsistent with the optimal repayment (Gathergood et al. 2017). In particular, a laboratory examination of borrowers with multiple cards shows that they prioritize paying off smaller debts rather than high interest rate debts (Amar et al., 2011). By contrast, data from the field suggests that credit card holders use a balance matching heuristic, paying more to their largest debts (Gathergood et al. 2017).

We draw on lab and field data to provide evidence that people are knowledgeable that they should repay their highest interest rate debts first. Furthermore, borrowers do prioritize these debts to some degree. In addition, we document a dispersion effect of minimum payments. That is, minimum payments reduce participants likelihood of repaying optimally by leading them to spread their discretionary repayments (i.e., payments above the minimum) across more accounts than those without minimum payments. We find that this strategy change persists after accounting for the tendency to target minimum payment amounts (Stewart 2009), and we do not find evidence supporting widespread use of heuristics based on balance amount.

Data from the lab and field suggest consumers are sensitive to the importance of interest rates in debt repayment. Our field data comes from a budgeting app and has 39,626 months of repayment data for 1,956 unique consumers. We find that consumers repay about $132 more (t(37,789)=3.14, p=.0017, equivalent to 4% of the average balance) to their highest interest rate debt in a month, controlling for the size of their balance. These data are consistent with self-reported strategies from Mturk experiments. Many participants (47%) report repaying high interest debt is the most important element in their decision, significantly more than the second highest strategy, splitting evenly across cards (14.5%, χ²(1)=43.68, p<.001). However, of the group focused on high interest, 38.5% report wanting to pay most, rather than all, of their repayments toward their highest interest rate debt, thus insufficiently weighting interest.

We next examine minimum payments as one structural factor that may alter repayment strategies away from paying the highest interest rate cards first, further interfering with the ability to repay optimally. In study two, participants responded to a three round debt repayment scenario. Each participant had 6 credit cards to repay, with outstanding balances and interest rates stated for all cards. Participants (N=375) were randomly assigned either to have a minimum payment associated with each debt or not. In the minimum payment condition, participants faced a $25 fee per account paid below the minimum. Participants made allocations to all debts in the same table. We find that participants in the minimum payment condition were less likely to repay optimally (t(373)=2.91, p<.01). This suboptimal allocation in the minimum payment condition was driven by overdispersion. Participants made payments towards more cards, over and above the minimums payments themselves (t(373)=3.624, p<.01). We did not find evidence of substantial portions of participants paying off the smallest debt first, contrary to prior literature. We also replicated these effects in a setting where participants made one allocation per screen.

In study three, we replicated these findings utilizing a within subject design over 3 weeks. Participants (n=189) completed the self-report measures discussed previously and were then randomly assigned to one of two orders of our minimum payment and no minimum control conditions. Within-subjects, we find a marginally significant decrease in optimal play in the minimum payment version of our task (t(188)=1.698, p=.091) and a significant increase in the proportion of accounts paid above the minimum (t(188)=4.513, p<.00001). The within-subject version suggests that knowledge and individual differences are unlikely the key driver of the strategic effects.

In study four, we allow participants (N=366) to save money in addition to repaying debt. Participants in the minimum payment condition are significantly more likely to save than those without minimums (t(364)=3.20, p<.01), leading to higher interest costs incurred. In addition to repaying less, they continued to repay less optimally than those without minimums (t(364)=3.46, p<.01). Among partici-

pants who made any excess repayment, participants in the minimum payment condition allocated to more accounts above the minimum (t(360)=1.97, p<.05). These results suggest that impacts of minimum payments on strategy remain important even after allowing for the effects of targeting. Finally, in experiment five we introduce a default minimum payment condition in which minimum payments are auto-filled for the participants (i.e., the default is to pay the minimum amount on all cards; N=258). Since the optimal strategy in the default and the minimum payment conditions are the same, differences between these conditions are unlikely to be driven by decision complexity. We find that the default condition attenuates the strategic differences between the minimum payment and no minimum payment condition. Like the no minimum condition (t(167)=3.52, p<.01), participants in the default condition are more likely to use the optimal strategy (t(171)=2.16, p<.05). As a result, it is unlikely that the complexity of the optimal rule is responsible for the changes induced by minimum payments. Additionally, the increase in optimal repayment above the minimum payment condition provides evidence that actively selecting an allocation amount for each debt contributes to the strategic differences we observe induced by the minimum payments.

We provide new evidence on the strategies that lead people to repay their debts sub-optimally. Contrary to prior literature, we find people are aware of the importance of prioritizing payments to higher interest rate debts. They are sensitive to interest rates, but insufficiently so. We document a novel cost of minimum payments: minimums induce participants to spread money more evenly across accounts. Our results suggest that mandating salient presentations of interest rates could reduce the costs of borrowing for consumers.

Searching, Fast and Slow: How Time Preferences Influence Credit Card Search and Choice

EXTENDED ABSTRACT

When we think about present bias, we usually think about the choices that people make. We expect people who are present biased to eat the one marshmallow now, take the smaller immediate payment, and choose the credit card with a teaser rate (Chabris et al. 2009; Reimers et al. 2009; Shoda et al. 1990).

Across four studies and four field surveys (total N = 18,405), we show that present-biased individuals are not any more likely to choose credit cards with teaser rates nor do they focus attention on or give more weight to up-front costs. Instead, they simply search less overall, terminating search much more quickly than patient individuals. They search less for all pieces of information about credit cards, which leads them to choose cards that accrue higher total costs. This was consistent with our hypothesis that present-biased individuals would search less, being unwilling to engage in unpleasant search that could reduce future costs.

In Study 1 (pre-registered, MTurk, 300 recruited, n = 273 completes, M_{age} = 35.6 years, 57% male), participants were asked to imagine they are choosing a credit card from four options. They were told they would hold the card for two years, with an average unpaid balance of $5,000 (excluding fees), which is the average unpaid balance on credit cards in the US. After testing comprehension of the set-up, participants were shown eight credit cards (two trials with four credit cards each). The cards varied in introductory interest rate, introductory period, standard interest rate, annual fee, and appearance. Participants viewed the credit cards with attribute information in Mouselabweb; to track search, we hid attribute information behind boxes, revealing it only when participants moved their mouse over the box. They were asked to choose the credit card that would accumulate the lowest total costs (considering all interest rates and

fees), with monetary incentives to choose correctly ($2.00 per correct answer). To assess time preferences, we used an adaptive measure (DEEP; Toubia et al. 2013) that uses a series of choices between smaller-sooner and larger-later amounts to assess discounting.

As predicted, present-biased individuals searched substantially less, opening fewer attribute boxes (t = 7.06, p < .001). This effect held when we added covariates to control for individual differences in participants' credit scores and debt literacy (t = 3.65, p < .001). Additionally, the effect was not driven by reduced engagement in the survey; even when we controlled for how long participants spent on the survey as a whole, the effect of present bias on less search remained (t = 7.26, p < .001).

Present bias also had a significant negative effect on choice accuracy (t = 1.95, p < .05). A mediation model (Preacher and Hayes 2008) was consistent with our hypothesis that present-biased consumers choose credit cards with higher fees because they search less extensively. Finally, process evidence suggests the difference in search is driven by the amount of search, not which attributes are searched. Accordingly, present-biased participants searched less for every piece of information, even for low introductory rates and back-loaded fees that might be most appealing to them. Present-biased individuals also were not significantly more likely to choose cards with low introductory rates. This suggests that present bias affects the process through which individuals make credit card decisions, not the weights they place on different attributes.

In Study 2, we demonstrated that the effect is not caused by the unfamiliar display of Mouselabweb, in which information is hidden behind boxes. Neither was it confined to the online Mechanical Turk sample. We sought a sample of 300 participants, some of whom were university students who searched credit cards in the laboratory while they were monitored using a Tobii eye-tracker (n = 52). Others were online participants monitored using Mouselabweb with closed boxes as in Study 1 (n = 248, from Prolific Academic). The rest of the procedure was the same as in Study 1. We coded search as the number of boxes opened for Mouselabweb participants (as in Study 1) and as the number of boxes fixated for eye-tracking participants. Present bias again predicted less search (t = 2.05, p = .041). There was no present bias x sample interaction (t = 0.91, p = .326), suggesting that the relationship was not moderated by the type of search monitoring or sample. In Study 3, we replicated Study 1 with a group of MBA students (n = 185), who scored considerably higher on measures of financial literacy and numeracy, and in many cases had experience working in the financial sector. The results mirrored those in Study 1.

In Studies 4A–4D, we measured the association between time preferences and search in large field surveys of American households (SBI's MacroMonitor field survey). In each of the four field surveys, there were over 4,000 American households participating. Respondents reported how many resources they searched in the past year when choosing financial products. They also responded to a series of intertemporal choices between smaller-sooner and larger-later amounts. From these choices, we calculated present bias for each participant. We then analyzed whether present bias predicted less search. There was a significant negative correlation between present bias and search, such that present-biased respondents searched significantly less than more patient respondents (r = –0.18, p < .05). Though the effect size was fairly small, these results suggest that present biased consumers search less.

Every choice depends upon the selection of a decision strategy, which involves the expenditure of effort now for better outcomes later. Our results suggest that time preferences do not lead people to search different pieces of information nor does it influence the

weight given to each attribute. Rather, they lead to less extensive search, causing people to terminate search more quickly.

An Under-Shooting Bias in Asymmetric Resource Problems

EXTENDED ABSTRACT

Suppose that you are one of many competitors choosing between two options. One option has more resources than the other, and the resources from each option will be divided equally among everyone who chooses it. Which option would you choose? A myriad of important decisions involve these basic characteristics: one option contains more resources than the other (e.g., more customers, more jobs, etc.), and the greater the number of competitors choosing that option, the fewer the resources available to each. In order to maximize your own outcome, you have to think about the strategies of others.

We refer to such decision problems as asymmetric resource problems. To mimic this type of problem, we have developed a Two-Account Game. In the game, N players choose between a large account containing $L and a small account containing $S (<$L). Players know that everyone must choose independently and cannot swap money afterward, and that the money in each account will be divided equally among those who choose it.

If everyone followed the Nash equilibrium mixed strategy, on average approximately $L/(L+S)*N$ players should choose account L. This proportion is an equilibrium because, regardless of account choice, each competitor stands to earn $(L+S)/N$, and no competitor has an incentive to deviate and choose a different account.

Behaviorally, however, people may not adopt equilibrium strategies. If the proportion of players choosing the large account exceeds $L/(L+S)$, then those who chose the large account will stand to earn less than those who chose the small account; we term this outcome over-shooting. On the other hand, if the proportion of players choosing the large account is below $L/(L+S)$, then those who chose the small account will stand to earn less than those who chose the large account; we term this outcome under-shooting.

We conducted multiple studies to test whether people exhibit any biases in the game, and find a systematic undershooting bias. In Study 1, involving real money, a group of online workers chose between one account containing $55 and one containing $45, knowing that the money in each account would be divided equally among those who chose it. We found a significant under-shooting bias: only 42.0% of participants chose the large account, a proportion not only smaller than the Nash-equilibrium benchmark of 55%, but also smaller than 50%. Study 2 tested whether people would still exhibit the under-shooting bias if they played many rounds of the game. Specifically, a group of Mechanical Turk participants were asked to choose between one account containing $70 and one containing $55, and to repeat the same game for 25 rounds without feedback. We found systematic under-shooting both in the first round and across all the rounds.

Study 3 replicated the result in a more contextually-rich setting and with different levels of resource asymmetries between the two options. Participants were asked to imagine that he/she was one of 20 ice cream vendors who planned to go to one of two outdoor events tomorrow to sell ice cream. The more vendors that went to a certain event, the less profit each vendor could make. However, there would be more customers in one event than in the other. Participants were randomly assigned to one of three asymmetry levels (number of customers in the large event versus number of customers in the small event): 5500 vs. 4500, 7000 vs. 3000, and 8500 vs. 1500. In all conditions, fewer participants went to the large event than the proportion of customers in the large event.

Study 4 explored a boundary condition of the under-shooting bias. One potential mechanism for the bias is mistaken beliefs about the strategies of others. If that were indeed the case, then manipulations that increase participants' understandings of how others form strategies could potentially mitigate the bias. Based on prior work showing that making others more vivid leads to improved perspective-taking, we manipulated the vividness of other players to examine whether this manipulation would mitigate the under-shooting bias. Thus, Study 4 had two between-subjects conditions: control and vividness. All participants were asked to imagine that they were playing the two-account game with 19 acquaintances. In the vividness condition, participants were asked to write down the first names of the 19 acquaintances and then choose the account. In the control condition, participants were not asked to do so. The results showed that the under-shooting bias appeared in the control condition but disappeared in the vividness condition, suggesting that vividness manipulation mitigated under-shooting and led participants to make choices consistent with the equilibrium prediction.

Resources are limited, and competition is an important part of life; people apply for a limited number of jobs and compete for a limited number of customers. While extensive research has studied resource-competition problems in which the allocation of resources is either symmetric or unknown, little work has been done on the general class of problems that involve asymmetric allocations. This research fills this gap by developing a simple yet versatile Two-Account Game to study the asymmetric resource problem. We found the asymmetry to be critical for behavior—while extant work has yielded little evidence of systematic deviations from equilibrium strategies, we found a significant under-shooting bias across different populations, different domains, and different levels of resource asymmetries. Additionally, we show that this bias vanishes if the competitors in the game are made vivid.

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Understanding More About Having Less: Consumer Responses to Scarcity

Chair: Wooyun Yang, Hong Kong University of Science and Technology, Hong Kong, SAR China

Paper #1: Resource Scarcity Enhances the Value of Pride

Anthony Salerno, University of Cincinnati, USA
Brianna Escoe, University of Cincinnati, USA

Paper #2: My Voice Also Counts: Financial Scarcity Shapes Attitude Extremity Through a Heightened Need to be Heard

Wooyun Yang, Hong Kong University of Science and Technology, Hong Kong, SAR China
Jeehye Christine Kim, Hong Kong University of Science and Technology, Hong Kong, SAR China
Rashmi Adaval, University of Cincinnati, USA

Paper #3: Reminders of Resource Scarcity Decrease State Social Self-esteem and Increase the Desire for Self-Improvement Products

Ali Tezer, HEC Montréal, Canada
Caroline Roux, Concordia University, Canada
Kelly Goldsmith, Vanderbilt University, USA

Paper #4: Impact of Product Supply Level on Choice Switching

Yuechen Wu, Johns Hopkins University, USA
Meng Zhu, Johns Hopkins University, USA
Rebecca Ratner, University of Maryland, USA

SESSION OVERVIEW

Scarcity pervades many corners of this world. Nearly 700 million people live in extreme poverty (World Bank 2018) and resources such as clean water and electricity are inaccessible to more than 10% of the world population (WHO and UNICEF 2014; UNDP 2014). Even relatively wealthy individuals can feel like they lack resources because of changes in the environment. Fluctuating economic conditions and widening income disparities (Alvaredo et al. 2018) can impact their subjective interpretation of their own condition by shifting what is considered a desirable standard (Cannon, Goldsmith, and Roux 2019; Sharma and Alter 2012). Despite the pervasiveness of scarcity, consumers experiencing scarcity have often been ignored in academic research (Smith 2005; Chakravarti 2006) and there remain many unanswered questions about how consumers experience and cope with scarcity. This session aims to understand how people cope with the experience of scarcity and how such coping processes spill over to other decisions such as product choices.

Salerno and Escoe begin the session by examining how people directly cope with the experience of scarcity by engaging in emotion regulation. The authors argue that people regulate negative emotions arising from scarcity with emotional benefits of pride. This leads people experiencing scarcity to systematically value pride more.

The next three papers examine indirect ways of coping with scarcity via attitude expression and choice. Yang, Kim, and Adaval point to attitude expression as an indirect way of coping with the experience of scarcity. The authors show that consumers experiencing scarcity express attitude more extremely because they have a heightened need to be heard.

Tezer, Roux, and Goldsmith show that the process of coping with scarcity can spill over to product decisions. The authors argue that the experience of scarcity threatens social self-esteem and people cope with this threat by acquiring products offering self-improvement benefits. This leads people experiencing scarcity to systematically prefer self-improving products.

Finally, Wu, Zhu, and Ratner demonstrate that people use choice switching to cope with the experience of scarcity. The authors argue

that scarcity increases arousal which in turn intensifies the feeling of uncertainty in choice. This leads people to switch choice from an initially more-preferred to a less-preferred option.

The papers in this session collectively raise and answer the question: How do people cope with scarcity and how do such coping processes spill over to other decisions. In line with the conference theme of becoming wise, this session aims to expand wisdom by focusing on the under-heard segment of consumers and demonstrating how their decisions differ from the major segment. As the four papers in this session present a coherent set of novel findings about consumer responses to scarcity, we believe this session will appeal to a broad audience, including researchers interested in scarcity, affect, and attitude as well as those interested in public policy.

Resource Scarcity Enhances the Value of Pride

EXTENDED ABSTRACT

Resource scarcity occurs from a discrepancy between one's current level of resources and a more desirable reference point (Cannon, Goldsmith, and Roux 2019). Prior research has shown that resource scarcity can be accompanied by negative feelings such as stress, physical pain, and decreased life satisfaction (Chou, Parmar, and Galinsky 2016; Griskevicius et al. 2013; Sharma and Alter 2012). These negative feelings are from an underlying loss of control brought on by scarcity (Cannon et al. 2019). However, the literature to date has not considered how consumers seek to regulate such feelings. We investigate this issue.

Two approaches have been documented for how consumers regulate their feelings. One approach follows the classic principle that emotion regulation motivates behavior towards feeling good (Cohen, Pham, and Andrade 2008). This is known as *hedonic emotion regulation* (Tice and Baumeister 2000). Another more recent approach assumes that emotion regulation does not always motivate behavior geared towards feeling better per say, but rather, towards providing emotional benefits to salient goals (Coleman and Williams 2013). This is known as *instrumental emotion regulation* (Tamir 2016). Together, these two approaches suggest that consumers may value different positive emotions depending on what goals are currently salient.

We propose that when resource scarcity occurs, consumers favor regulating their negative feelings by engaging in instrumental rather than hedonic emotion regulation. Specifically, consumers may forego happiness and instead value positive emotion that helps address the goal to regain control brought on by scarcity. We propose that pride is uniquely suited to serve this function. Pride is a self-conscious emotion associated with achievement and successful self-regulation (Tracy and Robins 2007) and its experience creates an emotion-based inference of being self-disciplined (Salerno, Laran, and Janiszewski 2015). Thus, we hypothesize that resource scarcity enhances the value of pride owing to its ability to compensate for the loss of control instantiated by scarcity. Four studies test this prediction.

Study 1 examined the effect of resource scarcity on the perceived usefulness of different emotions. We used a single factor (mindset: control, scarcity, abundance) between-subjects design. A writing task manipulated participants' mindset. Participants in the scarce (abundant) condition wrote about a time in which resources were scarce (abundant). The control condition wrote about a typical

day. Next, participants saw 12 emotions and categorized them into two boxes according to which were most (least) useful. An effect of mindset was found on the propensity to categorize pride as most useful ($\chi^2 = 7.74$, $p = .02$). Participants in the scarcity condition categorized pride as most useful (79.3%) more than participants in the abundance (57.6%) and control condition (59.4%).

Study 2 tested the motivation to engage in hedonic versus instrumental emotion regulation by comparing the persuasiveness of an ad featuring either a happiness-based or pride-based emotional appeal. We used a 2 (mindset: control vs. scarcity) x 2 (emotional appeal: happiness vs. pride) between-subjects design. Mindset was manipulated as in study 1. Next, participants examined a gym ad that either used a happiness or pride emotional appeal and indicated its persuasiveness. An interaction emerged between the mindset and emotional appeal factors ($F(1, 195) = 4.24$, $p = .04$). In the pride condition, participants were more persuaded in the scarcity than control condition ($p = .04$). Conversely, in the happiness condition, participants did not differ in their reported persuasiveness ($F < 1$).

Study 3 used a measurement-of-mediation approach to provide process evidence by measuring participants' motivational orientations. If people value pride more owing to its ability to compensate for scarcity's underlying loss of control, then they should report being more motivated to become better individuals (i.e., instrumental emotion regulation) than to feel better (i.e., hedonic emotion regulation). We used a single factor (mindset: control vs. scarcity) between-subjects design. We manipulated mindset via a newspaper article that either discussed zoos (control condition) or the planet's scarce resources (scarcity condition). Next, participants indicated whether they currently held an instrumental (vs. hedonic) motivational orientation. Finally, participants watched and evaluated a pride-inducing commercial. Participants in the scarcity condition reported that their motives were more instrumental in nature ($t(182) = -3.19$, $p = .01$) and had higher evaluations of the commercial ($t(182) = -2.15$, $p = .03$). Furthermore, the effect of scarcity on commercial evaluation was mediated through motivational motivation (indirect effect 95% CI: 0.56 to 4.87).

Study 4 used a moderation-of-process approach to provide process evidence by manipulating whether participants could affirm personal values that bolster against threats to the self (i.e., self-affirmation; Steele 1988). If our theorizing regarding the mechanism by which resource scarcity enhances the value of pride is so, then this effect should persist (attenuate) in the absence (presence) of self-affirmation. We used a 2 (mindset: control vs. scarcity) x 2 (self-affirmation: no affirmation vs. affirmation) between-subjects design. Mindset was manipulated as in study 1. Next, participants ranked the importance of various personal values. In the affirmation (no affirmation) condition, participants wrote about the value most (least) important to them. Lastly, participants were told they could watch a new two-minute ad campaign highlighting the pride of their university. However, in order to watch the video, participants were first asked to complete another task in which they evaluated products, such that for every product they evaluated, they could watch two seconds of the video. An interaction emerged between the mindset and self-affirmation factors ($F(1,398) = 4.46$, $p = .035$). In the no affirmation condition, participants were more motivated (i.e., evaluated more products) in the scarcity than control condition ($p = .01$). However, in the affirmation condition, participants were similarly motivated in the scarcity and control condition ($F < 1$).

This research contributes to the resource scarcity literature by documenting the affective, rather than cognitive, behavioral responses to scarcity. It also contributes to the emotion regulation literature by identifying one factor (i.e., resource scarcity) that determines

when instrumental vs. hedonic emotion regulation takes precedence. Finally, this research has direct implications for consumer well-being as resource scarcity is a pervasive phenomenon in our everyday lives.

My Voice Also Counts: Financial Scarcity Shapes Attitude Extremity Through a Heightened Need to be Heard

EXTENDED ABSTRACT

Extreme attitudes are powerful because they have a disproportionately large impact on shaping the overall opinion of the crowd. Media coverage of extreme views polarizes public attitudes (Powell 2011). For instance, exposure to news on terrorism increases prejudice towards outgroup members (Das et al. 2008), and consumption of news showing extreme political views polarizes viewers' political stance (Jones 2002). Even in marketing, the extremity of product reviews shapes decisions of potential buyers as consumers often base their purchase decisions on such reviews (Mudambi and Schuff 2010). Such wide ranging consequences raise the need to understand causes of attitude extremity. This research proposes that one cause of extreme attitudes is scarcity and investigates why.

We propose that financial scarcity, a state of feeling financially worse-off than a salient standard (Sharma and Alter 2012), increases attitude extremity due to a heightened need to be heard. Because people experiencing financial scarcity are often deprived of the chance to make themselves heard, they are likely to have a greater need to be heard. Indeed, past research has shown that authorities give less consideration to people experiencing financial scarcity (Narayan et al. 2010); polling agencies grant a smaller weight to opinions of the poor (Birch and Moss 2017); and the opinions of such individuals are often not welcomed by others (Lott 2002). Since feeling significant is a fundamental human need (Kruglanski et al. 2017), we posit that financial scarcity will increase the need to be heard. One way of being heard is by expressing attitudes more extremely. Compared to moderate attitudes, extreme attitudes capture more of the audience's attention and are more likely to be noticed by others (Fiske 1980). Hence, financial scarcity increases attitude extremity in an effort to satisfy the heightened need to be heard.

Study 1 ($N = 1,612$) tests the hypothesized relationship between financial scarcity and attitude extremity by measuring financial condition and attitude extremity. Participants first indicated their opinion on nine social/political issues such as a ban on plastic products and farm subsidies along 11-point bipolar scales anchored at -5=Strongly oppose, 0=Neutral, and 5=Strongly support. Annual household income was used as a proxy for financial scarcity (Johar, Meng, and Wilcox 2015; etc.). Attitude extremity was measured by taking the absolute score of deviation from the midpoint and summing them. As hypothesized, a simple linear regression model revealed the household income level to be a significant negative predictor of attitude extremity ($\beta = -0.41$, $p = .005$). This relationship remained significant ($\beta = -0.58$, $p = .007$) even after controlling for factors such as age, education, and emotional expressivity which have been shown by past research to impact attitude extremity (De Jong, Steenkamp, Fox, and Baumgartner 2008; Hamilton 1968). This finding suggests that people who are likely to experience financial scarcity (i.e., earning low-income) express relatively more extreme attitudes.

Study 2 ($N = 274$) tests underlying mechanism of the hypothesized effect by employing a single factorial between-subjects design (financial scarcity: scarcity vs. abundance). Financial scarcity was manipulated by having participants write about a situation in which they felt financially worse-off or better-off compared to others in the

same community (Sharma and Alter 2012). Attitude extremity was measured as in Study 1. Following this, participants' state need to be heard was assessed using 3 items (e.g., I have a strong desire to be heard). As predicted, participants in the scarcity (vs. abundance) condition expressed more extreme attitudes ($M_{scarcity}$ = 23.33, $M_{abundance}$ = 21.92; p = .07) and had a stronger need to be heard ($M_{scarcity}$ = 7.05, $M_{abundance}$ = 6.67; p = .06). Importantly, a mediation analysis revealed that a heightened need to be heard mediated the relationship between financial scarcity and attitude extremity (95% CI [.018, .455]), whereas the reverse mediation was not significant (95% CI [-.001, .117]).

Study 3 (N = 229) addresses an alternative account by increased arousal. One could argue that scarcity increases arousal which then leads participants to respond more extremely. If this were true, participants would respond more extremely to all issues as well as to statements that varied in extremity. However, if participants indeed have an extreme attitude, they would agree more strongly only to extreme statements, but not to moderate statements. Study 3 tested this logic by employing a 2 (financial scarcity: scarcity vs. control) X 2 (statement extremity: extreme vs. moderate) mixed design with the first factor manipulated between subjects and the second factor manipulated within subjects. Participants in the scarcity condition wrote about when they felt financially worse-off compared to others whereas participants in the control condition wrote about watching TV. Next, we measured participants' mood state using PANAS (Watson, Clark, and Tellegen 1988). Attitude extremity was then assessed by measuring the extent to which participants agree with extreme statements (adapted from Webber et al. 2018). Specifically, participants read five extreme statements and five moderate statements related to the same set of consumer issues (e.g., personal information collection) and indicated how much they agreed with each statement on a 7-point scale (1=Strongly disagree, 7=Strongly agree). Mood state did not differ between the two conditions (p > .30). As predicted, there was an interaction effect between financial scarcity and statement extremity (p = .09). On extreme statements, participants in the scarcity condition indicated stronger agreement ($M_{scarcity}$ = 4.19, $M_{control}$ = 3.86; p = .06), whereas participants in the scarcity condition ($M_{scarcity}$ = 4.41) were not different from those in the control condition ($M_{control}$ = 4.52) in their agreement on moderate statements (p = .44). Among the participants in the control condition, there was a significant negative correlation between standardized annual household income level and agreement on extreme statements (β = -0.19, p = .03) as evidenced previously in Study 1.

To summarize, we show that financial scarcity heightens people's need to be heard, which in turn increases attitude extremity. The present research adds to our understanding of financially deprived individuals who are often under-heard: Specifically, what makes people experiencing financial scarcity express their opinion in such an extreme manner.

Reminders of Resource Scarcity Decrease State Social Self-esteem and Increase the Desire for Self-Improvement Products

EXTENDED ABSTRACT

We draw from previous research demonstrating that reminders of resource scarcity promote the desire to advance one's own welfare (Roux, Goldsmith and Bonezzi 2015) to offer the novel prediction that reminders of resource scarcity will increase consumers' interest in and willingness-to-pay for products offering self-improvement benefits. We further propose that this occurs because reminders of resource scarcity threaten consumers' state social self-esteem, or one's concerns about how they are perceived by others (Heatherton and Polivy 1991). Indeed, experiences of scarcity (e.g., poverty) can be judged harshly by others (Olson et al. 2016) and have been shown to negatively impact self-esteem (Chaplin, Hill, and John 2014). Since people tend to attempt to repair their self-esteem when it is threatened (Crocker and Park 2004; Tesser 2000), products offering self-improvement benefits offer consumers exposed to reminders of resource scarcity a mean to repair their social self-esteem, as they "facilitate bettering some self-relevant aspect of the self, including personal attributes or performance in domains important to the self" (p. 403; Allard and White 2015).

We tested our predictions in five experiments. Experiments 1A and 1B tested whether reminders of resource scarcity increase willingness-to-pay (WTP) for products offering a self-improvement benefit. In Experiment 1A (N=111), scarcity was first manipulated by asking participants to list things they would be unable to do if certain resources were unavailable (e.g., water; Roux et al. 2015), whereas those in the control condition were asked to list things that they could do with the same resources. Next, participants reported their WTP for a sleeping aid product (Allard and White 2015). Results revealed that scarcity increased WTP ($M_{Scarcity}$=$6.26 vs. $M_{Control}$=$5.19; p=.03). Experiment 1B (N=170) replicated and extended the results of experiment 1A using a different scarcity manipulation and a consequential choice task (adapted from Becker, DeGroot and Marschak 1964). First, participants in the scarcity condition were asked to recall times when they felt resources were scarce, whereas those in the control condition were asked to list activities they did in the past week (Roux et al. 2015). Next, participants were presented with a set of Post-it notes for which self-improvement benefits were either highlighted or not (adapted from Allard and White 2015). WTP was assessed using 20 binary choices where participants had to indicate their preference between receiving the product or a certain amount of money ($0.10-$2.00 in $0.10 increments). Participants were instructed that the computer would randomly select one of their choices at the end of the experiment and they would receive the option selected. A two-way ANOVA revealed an interaction between scarcity and benefits (p=.01). When self-improvement benefits were highlighted, scarcity increased WTP ($M_{Scarcity}$=$0.69 vs. $M_{Control}$=$0.46; p=.02), but no significant difference was observed when these benefits were not highlighted ($M_{Scarcity}$=$0.42 vs. $M_{Control}$=$0.54; p>.2).

Next, experiment 2A (N=116) tested whether reminders of resource scarcity negatively affect state social self-esteem. Participants first completed the same episodic recall manipulation (Roux et al. 2015) as in experiment 1B. Next, all participants completed the 20-item State Self-Esteem scale (Heatherton and Polivy 1991), which assesses social, performance, and appearance self-esteem. Results revealed that while scarcity negatively impacted social self-esteem ($M_{Scarcity}$=4.77 vs. $M_{Control}$=5.39; p=.03), no significant differences were found for performance ($M_{Scarcity}$=5.10 vs. $M_{Control}$=5.27; p=.2) nor appearance ($M_{Scarcity}$=4.28 vs. $M_{Control}$=4.62; p=.2) self-esteem. Experiment 2B (N=240) tested whether social self-esteem mediates the effect of scarcity on WTP for a self-improvement product. Participants first completed a financial deprivation (vs. abundance) manipulation where they had to recall a situation in which they were financially worse off (vs. better off) in comparison to peers around them (Sharma and Alter 2012). Next, participants reported their WTP for the same sleeping aid product (Allard and White 2015) as in experiment 1A, and completed the state social self-esteem subscale (Heatherton and Polivy 1991) from experiment 2A. The order of the WTP and social self-esteem measures was counterbalanced and did not impact the results. Results first revealed that scarcity negatively

impacted social self-esteem ($M_{Deprivation}$=4.44 vs. $M_{Abundance}$=4.89; p=.02). Results further showed that scarcity increased WTP ($M_{Deprivation}$=\$5.40 vs. $M_{Abundance}$=\$4.16; p=.02). Importantly, social self-esteem mediated the effect of scarcity on WTP (95% CI = [.03; .61]).

Prior work has shown that, when self-esteem is threatened, people tend to prefer solutions that allow them to feel better in the immediate (e.g., indulging) over pursuing their longer term goals (e.g., self-regulation; Crocker and Park 2004). Experiment 3 (N=334) thus tested whether reminders of resource scarcity increase preferences for self-improvement products that offer more immediate benefits over ones that operate over a longer period of time. Participants first completed the same episodic recall manipulation (Roux et al. 2015) as in experiments 1B and 2A. Next, participants reported their willingness-to-try a sleeping aid smartphone application, which was framed as offering either immediate or longer-term benefits. Finally, participants completed the state social self-esteem subscale (Heatherton and Polivy 1991) used in experiments 2A and 2B. A two-way ANOVA first revealed a marginal interaction between scarcity and benefits (p=.07). When self-improvement benefits were immediate, scarcity increased trial intentions ($M_{Scarcity}$=3.84 vs. $M_{Control}$=3.13; p=.02), but no significant difference was observed when these benefits were longer-term ($M_{Scarcity}$=3.32 vs. $M_{Control}$=3.38; p>.8). Next, a two-way ANOVA found only a main effect of scarcity on social self-esteem, such that scarcity negatively impacted social self-esteem ($M_{Scarcity}$=4.90 vs. $M_{Control}$=5.86; p<.001). Importantly, a mediated-moderation analysis (95% CI = [.05; .34]) revealed that social self-esteem moderated the effect of scarcity on trial intentions when the self-improvement benefit was immediate (95% CI = [.04; .42]), but not when it was longer-term (95% CI = [-.05; .41]).

In summary, across five experiments, we demonstrate that reminders of resource scarcity decrease consumers' state social self-esteem, which in turn increase their interest in and willingness-to-pay for products offering self-improvement benefits, especially when the benefits are immediate (vs. longer-term). Although further research is necessary to fully understand the boundaries of these effects, this research provides an important step towards a better understanding of the specific desires that are instantiated in response to reminders of resources scarcity and their consequences.

Impact of Product Supply Level on Choice Switching

EXTENDED ABSTRACT

Consumers often choose between alternatives for which they have close preferences. These choices can be as small as which candy to purchase, to big decisions such as which house to buy. Prior literature shows that a scarce (vs. abundant) product supply leads consumers to include more of their favorite when they are choosing multiple items at a time (Zhu and Ratner 2015). But this research does not examine the effect of product supply on product choices when consumers are choosing between close alternatives in a single choice context. The primary objective of this research seeks to fill this gap by examining how product supply scarcity impacts the choices consumers make when they are choosing among close alternatives.

Prior literature suggests that scarcity induces arousal (Cialdini 2009; Zhu and Ratner 2015), and arousal intensifies affect (Gorn, Pham, and Sin 2001; Paulhus and Lim 1994). We build on this prior research, and predict that a scarce (vs. abundant) product supply increases consumers' likelihood of choosing the a priori less-referred option when consumers are choosing among close alternatives (i.e., consumers have a priori close preferences for alternatives in a choice set). We suggest that consumers feel uncertain about their relative preferences in this decision context. When they are faced with a scarce (vs. abundant) product supply and therefore a heightened arousal, this feeling of uncertainty will be intensified (Gorn et al. 2001). Such stronger feeling of uncertainty under product supply scarcity (vs. abundance) will lead consumers to become more likely to switch their choices from the initially more-preferred option to the initially less-preferred option.

Four studies tested our predictions. Study 1 (N = 191) showed that when consumers are choosing among close alternatives, a scarce versus abundant product supply increases their choice switching behaviors. Participants first rated their liking towards gift cards from eight apparel retailing stores. To operationalize liking closeness, we ranked each participant's preferences for these gift cards and created four pairs of gift cards representing strong to close pairs (favorite vs. least favorite; 2nd and 7th liked; 3rd vs. 6th liked; 4th vs. 5th liked). We then manipulated the supply level of the gift cards (scarce vs. abundant), and asked participants to choose one option from each pair. As predicted, we found a significant interaction between supply level and liking closeness (p = .025). In strong pairs, participants in both supply level conditions predominantly chose the a priori more-preferred gift card (ps > .32). However, when choosing between close alternatives, participants who were faced with a scarce (vs. abundant) supply level of gift cards became significantly more likely to switch and choose their initially less-preferred option (p = .03).

Study 2 (N = 239) measured the feeling of uncertainty to directly test its mediating role. Similar to the procedure of study 1, we asked participants to choose between two types of candies that they had close preferences for. We manipulated supply level by telling participants that we either had limited quantities (scarcity condition) or large quantities (abundance condition) of the candies. As predicted, participants who were faced with a scarce (vs. abundant) candy supply were significantly more likely to switch and choose the a priori less-preferred candy (p = .003). We also found evidence for the uncertainty account, and showed that feelings of uncertainty mediated the relationship between supply level and choice switching behavior (95% CI = [-.401, -.025]).

Study 3 (N = 698) further tested the process of arousal by directly manipulating it. We predicted that when participants' arousal was experimentally heightened, the effect of product supply on choice switching should attenuate, such that participants in the abundance condition would be as likely to switch as participants in the scarcity condition. As predicted, we found a significant interaction between supply level and arousal (p = .028). When arousal was not elevated (control condition), participants in the scarcity (vs. abundance) condition were significantly more likely to choose the a priori less-preferred option (p = .003), replicating findings in studies 1 and 2. However, when participants' level of arousal was increased by presenting the survey on a bright survey background, choice switching behavior did not differ between the abundance and scarcity conditions (p = .71). In addition, we found that feelings of uncertainty mediated the relationship between supply level and choice switching in the control condition (95% CI = [.06, .26]) but not in the arousal condition (95% CI = [-.12, .10]).

Study 4 (N = 217) generalized the results to a broader sense of scarcity. In the scarcity (vs. abundance) condition, we asked participants to read an article about the draining (vs. rich) supply of some essential natural resources, and then to write about the influence of such phenomenon on their personal lives. We also included a control condition to test the driving force of the effect. Replicating the findings in prior studies, we found that participants in the scarcity condition were more likely to choose the a prior less-preferred option than those in the abundance (p = .004) or the control conditions (p = .021).

The likelihood of choosing the a priori less-preferred option did not differ between the control and abundance conditions. These results suggested that the effects on choice switching were driven by the scarcity, rather than the abundance, manipulation.

To summarize, we find that a scarce (vs. abundant) product supply increases consumers' likelihood of choosing the a priori less-preferred option when they choose among close alternatives. We find evidence for the arousal and affect intensification account, and show that the effect is mediated by feelings of uncertainty and moderated by manipulating arousal. The present research contributes to literature on scarcity and decision making, and have practical implications for individual decision makers, managers and policy makers.

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Talk to "Her": On How the Nature of the Communication with Voice-Activated Devices Determines Judgement and Choice

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Paper #1: You Can't be Too Polite, Alexa! Implied Politeness of Mechanized Auditory Feedback and Its Impact on Perceived Performance Accuracy

Eda Sayin, IE Business School, IE University, Spain
Aradhna Krishna, University of Michigan, USA

Paper #2: Her Too: Consumers Express Greater Frustration and Aggression With Female Artificial Intelligence

Rhonda Hadi, Oxford University, UK
Lauren Block, Baruch College, USA

Paper #3: Minds vs. Machines: Investigating the Role of Anthropomorphism on Knowledge Misattributions in Voice-Activated Consumer Search

Kristy Hamilton, University of Illinois at Urbana-Champaign, USA
Adrian Ward, University of Texas at Austin, USA
Mike Yao, University of Illinois at Urbana-Champaign, USA

Paper #4: The Verbal Chameleon Effect, and Alexa. An Assemblage Theory Approach

Ana Valenzuela, Baruch College, USA
David Luna, University of Central Florida, USA
Jessie Du, Baruch College, USA

SESSION OVERVIEW

The U.S. installed base of smart speakers has hit 66 million in 2018 with 252 million U.S. adults using voice-assistants in their homes or cars (CIRP, 2019). These voice-activated devices only responds when summoned, and consumers usually talk to them using imperative language. Often, the responses coming from voice-activated devices responses can be robotic. Thus, information gathered and decisions made through a voice-activated devices are becoming more and more prevalent. In fact, anthropomorphic assistants may be able to offer an intriguing route to "becoming wise." Transforming our digital interactions into interpersonal experiences may be one way to calibrate our understanding of our knowledge when we access information online and our preferences when we make downstream decisions based on it.

Consumer behavior research has long examined the nature of consumer-object interactions (e.g., Fournier 1998), but these considerations become more complex and the consequences more profound when the objects we interact with are embedded with the unprecedented functionality as these voice-activated devices provide- allowing us to communicate, shop, consume media, and even monitor our health. Accordingly, the shift to these kind of devices presents consumer behavior researchers with an opportunity for academic research that is not only theoretically important, but that is also rife with timely substantive implications.

Our special session addresses this opportunity by exploring consequences stemming from a broad range of interactions with voice-activated devices and focusing on how the nature of the communication with them may affect information processing, judgements and downstream choice. We demonstrate that these device interactions can influence (1) the perceived accuracy of feedback coming from those devices when real-vocal-sound (versus synthesized-vocal-sound) is in use (Sayin and Krishna), (2) how likely consumers are to express frustration and aggression when interacting with female (versus male) AI (Hadi and Block), (3) how anthropomorphic "smart" assistants (vs. a non-anthropomorphic assistant) lead consumers to believe that they themselves are less smart (Hamilton, Ward, and Yao), and (4) how language accommodation to the way these voice-activated devices understand orders may enhanced consumers' sense of power, status seeking and motivated pro-social behavior (Valenzuela, Luna and Du). Accordingly, while each paper individually focuses on a consequential outcome stemming from the nature of the communication with a voice-activated device, collectively this session demonstrates that the behavioral outcomes and contingencies linked to the communication with voice-activated devices can vary widely.

Importantly, this session highlights that there are several mechanisms through which consumer communications with voice-activated devices might influence user responses, including the incongruency with expected politeness of human voices (paper 1), the attribution of ability and effort to certain gender characteristics (paper 2), the misattribution of knowledge to oneself (paper 3), and language accommodation to an imperative form of speech (paper 4). All papers are in advanced stages of completion with multiple studies run.

The progressive approaches and novel results in this session are sure to induce a lively discussion and are likely to appeal not only to researchers interested in voice-activated devices and the nature of the communication with consumers, but to a broader audience interested in consumer-product interactions and consumer interactions with technology more generally.

You Can't Be Too Polite, Alexa! Implied Politeness of Mechanized Auditory Feedback and Its Impact on Perceived Performance Accuracy

EXTENDED ABSTRACT

People interact daily with a variety of technical devices. For example, fitness trackers provide feedback on people's progress regarding their daily activity goals. The way the information between the device and humans is shared affects the strength of the human-device relationship. Hence, product designers try to design the messages provided by such devices in a more personable and relatable way; such as Apple's Siri use a human voice to communicate with users.

Prior research shows that anthropomorphism can make products more personable and lead consumers to think of the device in social terms (e.g., Gray, Gray, & Wegner, 2007). Anthropomophism also improves likeability of a product, product preference, satisfaction with the product, product loyalty, and brand love (Aggarwal & McGill, 2007; Chandler & Schwarz, 2010; Rauschnabel & Ahuvia, 2014). Prior literature mainly examines how incorporation of human-like elements impacts the "hedonic appeal" of a product. We focus specifically on consumers' perception regarding "product performance" of technical devices – its "utilitarian appeal"; we do so within a context where the product provides performance feedback to consumers. We explore whether making technical devices (e.g. running devices) sound more human, affects how consumers perceive the performance of the devices.

Our hypotheses are mainly built upon Brown and Levinson's politeness theory (1987) which suggests that people inflate performance evaluations when they need to give feedback, in order to avoid any negative emotional reaction from the other person. We argue that the more the device is anthropomorphized (through use of different vocal sounds), the more it is expected to follow social norms – behave politely. We recorded and processed human sounds in a studio to simulate synthesized sound. We equated the volume, pitch, and speed of the sounds. Synthesized vocal sounds usually lack the intonation of natural human speech. As such, real-human-vocal-sound (vs. synthesized-vocal-sound) will be perceived as more human. Thus, in line with politeness theory, whereby people expect inflated performance feedback from others, the accuracy of positive feedback from a device with real-vocal-sound (vs. synthesized-vocal-sound) will be perceived as being lower.

In Study 1, participants (N=98) were asked to imagine they bought a running device and went out for a run. They watched video of the run and were regularly provided feedback (with synthesized-vocal-sound vs. real-vocal-sound) regarding how many miles they had run. An ANOVA showed that perceived accuracy was lower for the real-vocal-sound ($M_{RealVocal}$=3.40) versus synthesized-vocal-sound condition ($M_{SyhthesizedVocal}$=4.42; F(1, 96)=10.06, p<.01).

In study 2, participants received either a negative (or positive) feedback (via synthesized or real-vocal-sound) regarding their performance (how well they did compared to others) after a quiz (N = 191). An ANCOVA on perceived accuracy revealed a significant effect of feedback type (F(1, 183)=76.54, p<.01) and a significant interaction effect (F(1, 183)=18.54, p<.01); the main effect of sound type was not significant (p=.10). When the feedback was positive, participants perceived the feedback with real-vocal-sound (vs. synthesized-vocal-sound) as less accurate ($M_{RealVocalPositive}$FB=4.01, $M_{SynthesizedVocalPositiveFB}$=5.06; F(1, 186)=12.29, p<.01). When the feedback was negative, participants perceived the feedback with real-vocal-sound (vs. synthesized-vocal-sound) as marginally more accurate ($M_{RealVocalNegativeFB}$=3.15, $M_{SynthesizedVocalNegativeFB}$=2.60; F(1, 186)=3.77, p=.05).

In study 3, we used the same design as in Study 2, and additionally explored the effects of sound-type on perceived politeness of the feedback provider (N=111) in a different task. An ANCOVA revealed a significant effect of sound type (F(1, 103)=11.67, p<.01) and feedback type (F(1, 103)=24.85, p<.01), but not a significant interaction effect (p>.50) on perceived politeness. Participants found real-vocal-sound to be more polite than synthesized-vocal-sound ($M_{RealVocal}$=3.96 vs. $M_{SynthesizedVocal}$=3.24. Additionally, they found positive feedback as more polite versus negative feedback ($M_{PositiveFB}$=4.12 vs. $M_{NegativeFB}$=3.09).

Another ANCOVA on perceived accuracy showed a significant effect of feedback type (F(1, 103)=43.93, p<.01), and an interaction effect (F(1, 103)=6.38, p<.05), but not a significant effect of sound type (p>.80). Simple contrasts revealed a significant effect of feedback type both within the synthesized-vocal-sound ($M_{SynthesizedVocalPositiveFB}$=5.11, $M_{SynthesizedVocalNegativeFB}$=2.43; F(1, 106)=41.08, p<.01) and real-vocal-sound conditions ($M_{RealVocalPositiveFB}$=4.32, $M_{RealVocalNegativeFB}$=3.21; F(1, 106)=7.13, p<.01). Examining the interaction further, we found marginally significant effect of sound type both within the positive-feedback (F(1, 106)=3.59, p=.06) and negative-feedback conditions (F(1, 106)=2.95, p=.09).

Finally, we conducted mediation analyses to explore the effect of sound type on perceived accuracy, through perceived politeness, within both feedback conditions. Within the negative-feedback condition, the effect of sound type (t=2.63, p<.05) on perceived politeness was significant. Controlling for sound type, perceived politeness had a significant effect on perceived accuracy (t=2.92, p<.01). Controlling for perceived politeness, sound type no longer had a significant effect on perceived accuracy (t=.69, p>.40). The indirect effect of sound type on perceived accuracy through perceived politeness was significant, with the 95% confidence interval (CI: .0807, .3776). Within positive-feedback condition, the effect of sound type (t=2.15, p<.05) on perceived politeness was also significant. Controlling for sound type, perceived politeness had a significant effect on perceived accuracy (t=4.15, p<.01). Controlling for perceived politeness, sound type had a significant effect on perceived accuracy (t=-3.15, p<.01). The indirect effect of sound type on perceived accuracy through perceived politeness was significant, with the 95% confidence interval (CI: .0657, .4312).

These results show that the effect of sound type on perceived accuracy through perceived politeness is moderated by feedback type. When participants received a positive feedback, perceived accuracy of feedback was lower with real-vocal-sound than with synthesized-vocal-sound, through increased perceived politeness. However, when participants received a negative feedback, perceived accuracy of feedback was higher with real-vocal-sound than with synthesized-vocal-sound, again through increase in perceived politeness.

We demonstrate that the desire to make products more human sometimes negatively affects their perceived accuracy - which is critical, because people may not use a device if they do not trust the provided information. Additionally, while the typical method is to pick one voice for one app (which may even be done at a consumer level – e.g., car owners choose a voice for their GPS from a menu), feedback voice for a device could be altered based on what type of feedback needs to be given.

Her Too: Consumers Express Greater Frustration and Aggression with Female Artificial Intelligence

EXTENDED ABSTRACT

Consumers are conversing with artificial intelligence (AI) more than ever before, whether it be with voice-activated assistants (e.g., Alexa, Siri) or customer service chatbots (it is predicted that by 2020, bots will power 85% of all customer service interactions; Hinds 2018). Product designers often try to "humanize" this technology (e.g., imbuing voice-activated assistants with a conversational human voice; presenting chatbots as human-like avatars; Brackeen 2017). Interestingly, the overwhelming majority of voice-activated devices are given a female voice (Lafrance 2016). This disproportion is often attributed to a lack of diversity in the developer community-- over 80% of AI developers are male, and implicit (or explicit) biases might lead them to cast female characters in "subservient" roles (Broussard 2018; Simonite 2018). While some industry voices have openly criticized this imbalance (Salinas 2018), surprisingly little research has actually explored how the ascribed "gender" of AI might influence users' responses.

We address this gap by beginning to explore how the gender assigned to AI can influence consumer responses. Research has found that female service employees are more often targets of expressed frustration and anger from customers than are male service employees, particularly in cases of service failure (Sliter et al. 2010). While AI has no real gender (Adam 1996), it is interesting to explore how the gendered personification of AI may similarly provoke differential responses. Specifically, we hypothesize that consumers are more likely to express frustration and or aggression when interacting "female" (versus "male") AI assistants. This effect should be especially likely to manifest if the AI assistant performs

inadequately. Further, any elicited frustration should accordingly impair subsequent downstream variables, including participants' performance on related tasks. Aside from being theoretically interesting, support for these hypotheses would have wide-ranging substantive implications given that people are increasingly relying on AI in their homes (Perez 2017) and in the workplace (Martin 2018).

In study 1 (N = 193), participants interacted with a voice-activated assistant on a mobile phone. The assistant was given a gender-neutral name ("Jamie," as per pretest results) and the assistant's assigned gender was manipulated by changing the app settings to use either a male or female voice. Participants were asked to complete various tasks (e.g., visiting various websites) through the assistant via voice commands and all these interactions were audio recorded. Afterwards, a coder blind to our hypothesis transcribed the recorded dialogue and noted any expressions of frustration or aggression (e.g., exasperated sighs, insults) from each participant. Due to the large percentage of participants who did not express any frustration or aggression (70%), we analyzed the data with a Poisson loglinear regression. Results demonstrated that participants were more likely to vocally express frustration and/or aggression throughout the interaction in the female (versus male) assistant condition (χ^2 =.40, χ2 = 4.97, p = .03).

Study 2 (N = 97) followed the same experimental as in study 1, except participants were asked to accomplish more precise tasks (e.g., asking Jamie to schedule a meeting). At the end of the experience, participants were asked to indicate if they were able to successfully complete the tasks with the assistant. Analysis of the audio recordings again demonstrated that participants were more likely to vocally express frustration and/or aggression with the female (versus male) voice assistant (p = .03). However, there was also a significant Assistant Gender x Success interaction on expressed frustration (F(1, 93) = 3.81; p = .05): in the female assistant condition, participants expressed significantly more frustration when the app did not successfully perform (p < .01). However, in the male assistant condition, there was no difference in expressed frustration cross the two app performance conditions (p = .76). Importantly, the assistant's gender did not impact whether or not the interaction was successful (p = .99), suggesting these factors operate independently. However, we manipulate assistant-produced frustration in the next study to more systematically probe this interactive effect.

In study 3 (N = 289) we extend the generalizability of our findings by examining the effect in the domain of chatbots, operationalizing AI gender via the assistant's name, and examining downstream effects on task performance. The study was a 2(Assistant Gender: male versus female) x 2(Frustration: absent versus present) between-subjects design. Participants were told to imagine they were the office manager of a firm, and they needed to chat with a virtual assistant to accomplish a series of tasks. The chatbot assistant (presented as an avatar pretested to be gender-neutral in appearance) was given either a female (Patricia) or a male (Patrick) name. While the bidirectional dialogue in our previous studies was designed to be as naturalistic as possible, it prevented us from controlling the assistant's real-time responses to participants' requests. In the current study we were able to control and manipulate the assistant's responses. Specifically, we manipulated frustration by having the assistant either respond in a competent way (understanding participants' inputs immediately) or in a frustrating way (repeatedly misunderstanding participants' inputs). After the frustration manipulation, participants were told that as the office manager for the firm, they needed to draft an email asking employees not to waste paper. Because previous research demonstrates that when individuals feel frustrated, their

performance on tasks suffers (Harold et al. 2016), we expected that when participants interacted with the female (versus male) assistant, frustration should impair participants' performance. To assess participants' performance on this task, we considered both the length (objectively measured by word count) and had an independent judge code the emails in terms of effort expended. Analysis results demonstrated an Assistant Gender x Frustration interaction on effort, in terms of both the objective (word count; p < .01) and coded measure (p < .03). In the female assistant condition, frustration reduced effort expended by participants (p < .001 and p < .001 respectively). However, in the male assistant condition, there was no difference in expended effort across the two frustration conditions (p = .49 and p = .51 respectively).

Minds vs. Machines: Investigating the Role of Anthropomorphism on Knowledge Misattributions in Voice-Activated Consumer Search

EXTENDED ABSTRACT

Consumers increasingly rely on the Internet for information, and they increasingly use voice to access this information; in fact, projections indicate that 50% of all web searches will use voice by 2020 (ComScore 2017). Prior research indicates that searching for and accessing online information causes consumers to become overconfident in their own knowledge—in a sense, to attribute the Internet's "knowledge" to themselves (Ward 2013a). These misattributions have been shown to increase consumer confidence and lead to increased purchase intentions (Bhargave, Mantonakis and White 2016); however, the miscalibration of knowledge that they produce may be at odds with the broader goal of "becoming wise." In this research, we investigate how using voice-activated digital assistants to search for information may moderate the misattribution of online information to one's own memory.

Firms such as Google envision voice activation as a way of making Internet search as frictionless as possible, both by eliminating the need for a physical interface and by encouraging the use of naturalistic language (Schalkwyk et al. 2010). Voice-activated digital assistants such as Google Assistant, Amazon Alexa, and Apple's Siri encourage naturalistic interactions by transforming Internet search into an interpersonal experience; rather than giving commands to a *machine*, consumers act as if they are conversing with another *mind* (e.g., Bellegarda 2013; Cowan et al. 2017). This route to reducing friction may have dual effects on perceptions of personal cognitive ability; although reducing the friction associated with search may increase knowledge misattributions, inserting an intermediary into the mix—particularly one that has been anthropomorphized with human-like characteristics—may reduce these misattributions.

In Experiment 1, we first investigated the effects of friction on knowledge attributions after Internet search. We operationalized friction in terms of device familiarity, with the logic that familiar devices are more likely to become an unobtrusive part of consumers' daily routines. We measured knowledge attributions using the Cognitive Self-Esteem (CSE) scale, a self-report measure assessing respondents' beliefs about their own abilities to think about and remember information (Ward 2013b). Device familiarity was measures in the beginning of the experiment in an allegedly unrelated questionnaire. Then, all participants (n = 252) completed a ten-item trivia quiz. Participants in the *Google* condition used Google to find answers. Participants in the *No Google* condition answered the questions without outside help. Participants in the *Control* condition were not given any instructions about how to answer. Finally, participants completed the CSE scale (α = 0.93).

A one-way ANOVA revealed a η_p^2 ʔicant main effect of condition, $F(2, 252) = 3.40$, $p = .035$, $\eta_p^2 = 0.027$. Participants had higher overall CSE scores in the *Google* condition ($M = 5.64$) than in both the *No Google* ($M = 5.29$, $p_{GvsNG} = .016$) and *Control* ($M = 5.32$, $p_{GvsC} = .038$) conditions; CSE scores were not different between the *No Google* and *Control* conditions ($p = .846$). We conducted a moderation analysis using hierarchical regression to test our prediction that the effect of Google search on CSE is moderated by device familiarity. The model in the first step was significant, $F(2, 174) = 4.00$, $p = .016$ $R^2 = 0.044$, and Google search was the only significant predictor of CSE (p = .050). As predicted, the model was significantly improved in the second step when the Google × Device Familiarity interaction term was included, $\Delta F(1, 173) = 10.08$, $p = .001$, $\Delta R^2 = 0.053$. The more that participants used their devices as part of their daily routines, the more that using Google results in increased CSE ($p = .010$). These findings suggest that reducing the friction associated with information search may increase levels of knowledge misattribution

In Experiment 2, we investigated the cognitive consequences of accessing information through voice-activated digital assistants, which may simultaneously reduce friction and introduce another mind into the mix. Participants (n = 127) completed a wine selection task either on their own (*Control* condition) or using one of two voice-activated digital assistants. Participants in the *Machine* condition used a voice-activated digital assistant called "Beta Simulator" to find information about and recommendations for various types of wine. Participants in the *Mind* condition used an assistant named "Sasha," that was programmed to include additional anthropomorphic features such as a human name ("Hi, I'm Sasha!"), backstory ("I have studied to become a sommelier…"), and conversational language. Both assistants provided the same information. After selecting their preferred wines, participants completed our key dependent measure, the CSE scale.

A one-way ANCOVA controlling for objective wine knowledge reveale ʔ ʔnificant main effect of condition, $F(2, 120) = 3.93$, $p = 0.022$, $\eta_p^2 = 0.061$. CSE in the *Mind* condition was significantly lower than in the *Machine* condition ($M_{Mind} = 5.26$ vs. $M_{Machine} = 5.60$; $p = .038$), and marginally lower than in the *Control* condition ($M_{Control} = 5.54$; $p_{MivsC} = .051$); there was no difference between the *Machine* and *Control* conditions ($p = .996$). These data suggest that using an anthropomorphic voice-activated digital assistant to access online information may undermine the general tendency to attribute the Internet's "knowledge" to oneself. Exploratory analyses of perceived anthropomorphism (Waytz, Heafner and Epley 2014) offer some clues as to why this might be the case. These analyses revealed that the two digital assistants were perceived similarly in terms of their ability to anticipate what one might enjoy ($M_{Mind} = 4.25$ vs. $M_{Machine} = 4.00$; $p = .417$), and only marginally differently in terms of their ability to plan their recommendations ($M_{Mind} = 5.47$ vs. $M_{Machine} = 5.00$; $p = .078$); however, participants perceived the anthropomorphic assistant "Sasha" to be significantly smarter than the non-anthropomorphic "Beta Simulator" ($M_{Mind} = 5.70$ vs. $M_{Machine} = 4.98$; $p = .011$). It may be that perceiving one's assistant as "smart" inhibits the tendency to attribute this assistant's knowledge to oneself.

These data suggest that anthropomorphic assistants may offer an intriguing route to "becoming wise." Transforming our digital interactions into interpersonal experiences may be one way to calibrate our understanding of our own knowledge when we access information online.

The verbal chameleon effect, and Alexa. An assemblage theory approach.

EXTENDED ABSTRACT

Amazon's Echo (as other voice-activated home devices) is a smart home speaker embedded with artificial intelligence. Dubbed Alexa, Amazon's Artificial Intelligence has gained popularity in many households. The U.S. installed base of smart speakers has hit 66 million in 2018 (CIRP 2019) with 252 million U.S. adults using voice-assistants in their homes or cars (CIRP 2019). Consumer decisions made through a voice-activated device are becoming more and more prevalent. Alexa only responds when summoned, and consumers usually talk to her using imperative language. Often, Alexa's responses can be robotic. In this paper, we investigate how language accommodation to Alexa's commands may affect downstream decisions and behavior.

Chartrand and Bargh (1999) established the basis for the chameleon effect. The chameleon effect is a specific form of synchrony that takes place among dyads rather than within and between groups (for a review, see Chartrand & Lakin 2013). As adults, we engage in mimicry to establish and maintain social relations with others (Chartrand & Bargh 1999). However, the mimicry literature concentrates on its nonverbal aspect. Verbal mimicry (Muir et al. 2016), on the other hand, has received less attention. A related theory in linguistics literature relates to the mechanism underlying verbal mimicry: Accommodation theory (Giles 1973; Gallois, Ogay, and Giles 2005; Koslow, Shamdasani, and Touchstone 1994).

Two crucial theories in the field of linguistic accommodation explore the motivation for verbal imitation. One theory, the interactive alignment model, describes imitative behavior as automatic and uncontrolled (Goldinger 1998; Pickering and Garrod 2004). According to this theoretical framework, every level of linguistic representation is connected within an individual's mind, as well as interconnected with the listener. This automatic process leads to the activation of the particular linguistic representation used by a speaker in the listener's mind. However, this potentially automatic process seems to be goal-directed: the speaker modulates social distance by using either converging or diverging speech patterns (Shepard, Giles, and Le Poire 2001).

Convergence, which is of particular interest here, arises when speakers alter their linguistic patterns to adopt styles more like that of their interaction partners (see also: Wisniewski, Mantell and Pfordresher 2013). Verbal mimicry can even be used strategically to influence the mimickee's opinion. For example, Tanner, Ferraro, Chartrand, Bettman, and van Baaren (2008) run studies in which, while conducting a product test (e.g. water, snack), the interviewer (in fact a confederate) mirrored the gestures of the participant, and imitated the participant's comments, as if to verify what he or she said. Importantly, in the control condition, the interviewer spoke a sentence in an equal length to participants' statement, but none of the words were mimicked. The results provided evidence that participants who were nonverbally and verbally imitated by the confederate provided significantly higher ratings of the products tested than those who were not mimicked.

In our study, we focus on the dyad consumer-Alexa, which is part of the new assemblage theory (Hoffman and Novak 2018). With an aim to understand whether consumers will adapt their language to a machine. This presumably happens automatically and, as accommodation theory suggests, may also be goal-driven. Alexa, positively reinforces speech behavior by providing the answers that the individual is searching. This, in turn, motivates further accommodation by the individual. In this paper, we investigate the

consequences of such linguistic accommodation. We propose three potential outcomes of verbal accommodation: enhanced sense of power, status seeking and motivated pro-social behavior. Talking to Alexa makes people use assertive language, which increases their feelings of **power**. High power individuals are more persuaded by hard-sell advertising, which emphasizes utilitarian properties of products, hold more favorable attitudes towards a high vs. a low-status product, and show less concern for visible, conspicuous consumption (Rucker and Galinsky 2009). Finally, previous research (Kulesza, Dolinski, Huisman, and Majewski 2014) has found that verbal mimicry, or accommodation, leads to **prosocial behavior**. A set of three studies tests these ideas.

In these studies, participants worked in individual lab rooms where they were presented with an Amazon Echo dubbed "Computer." Participants were given a 3-minute practice run. After that, we measured their assessment of the experience on a 7-point scale (1 = Not at all; 7 = Very much). After a short break, participants are given 8 tasks to fulfill with their Echo and told that they would get rewarded by their performance. After that, they had to make different downstream decisions depending on the study. At that point, we measured their level of language accommodation ("I like to accommodate to others during a conversation", "I like to mimicry others during a conversation) and effectiveness communicating with Echo. Individual differences were measured and, importantly, their experience (yes/no) with Alexa and with voice-activated phone systems (type Siri) were recorded.

Study 1: Experience and Language Accommodation (N= 114). Liking of their Alexa experience: we identify a significant two-way interaction between whether participants had prior experience with Alexa and whether they had experience with other voice-operated systems (F (1, 113) = 6.47, *p* < 0.05). Participants liked their experience more when they had not interacted with Alexa before but had some experience using voice to operate technology (M= 5.2) compared with when they had not interacted with Alexa and had no prior experience with other voice activated system (M = 4.4) or had prior experience with both (M = 4.5).

The same pattern was identified for language accommodation (F (1,113) = 3.87, *p* < 0.05) and the perception of communication effectiveness (F (1,113) = 6.73, *p* < .01). As in Muir et al. (2016), the increased speech assimilation due to the novelty (no prior experience with Alexa) but accessibility of the task (prior experience with other voice-operated systems) predicted enhanced perceptions of the communicative effectiveness of the speaker.

We had also asked participants to write a 30 words add about "Computer". We analyzed it using LIWC and found a significant difference in the summary variable called **Clout** (refers to the relative social status, confidence, or leadership that people display through their writing or talking): 90 score when they had not interacted with Alexa before vs. 84 when they had F (1, 113) = 4.35, *p* < .05).

Study 2: Pro-social Behavior (N= 90). The procedure was identical to that of Study 1, but after performing the tasks with Alexa, those that had been able to perform more than 3 tasks, were asked for their propensity to "participate in some kind of volunteer work" (7-point scale: Definitely will not, Definitely will). We again identified a significant two-way interaction between whether participants had prior experience with Alexa and whether they had experience with other voice-operated systems (F (1, 89) = 3.97, *p*< .05). Participants were more willing to volunteer when they had not interacted with Alexa before but had some experience using voice to operate technology (M= 6.1) compared with when they had not interacted with Alexa or any other voice activated system (M = 4.8) or had prior experience with both (M = 5.3).

Study 3: Status Consumption (N=93). The procedure was again the same as Study 2 but participants were asked to rate (7-point scale: "I would like this ad") a status-driven ad ("A symbol of status. The Office Pen is designed to attract attention with its sophisticated design") and a non-status driven ad ("A symbol of quality. The Office Pen is designed to perform consistency with its extraordinary quality."). Then they were asked to provide their WTP (10% to 120% of retail price) of status (e.g. briefcase, silk tie) or non-status products (e.g. sofa, washing machine). We identified again a significant two-way interaction between whether participants had prior experience with Alexa and whether they had experience with other voice-operated systems for liking of status Ad (F (1, 92) = 3.91, p< .05) and overall WTP for status products (F (1, 92) = 3.57, p< .06). In both cases, status was valued more when there was no experience with Alexa but experience with voice-operation (M= 4.35 and 5.40 respectively) compared with when there was no experience with either of them (M= 3.10 and 4.80 respectively).

Taken together, a pattern of language accommodation when talking to Alexa leads to proneness towards pro-social behavior and status seeking when consumers' experience is new but there is already a sense of what is it to adapt to voice-operated technology.

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Promise and Perils for Agency in Technology Augmentation

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Hope Jensen Schau, University of Arizona, USA

Paper #1: The Double-Edged Sword of Online Collective Deal Creation

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Colin Campbell, University of San Diego, USA

Paper #2: Managing For Me, Myself, and AI: Why Mythology Hurts AI Investments

Simona Botti, London Business School, UK
Markus Giesler, York University, Canada
Stefano Puntoni, Erasmus University Rotterdam, The Netherlands
Rebecca Walker Reczek, Ohio State University, USA

Paper #3: Quantification, Algorithms and Agency

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Ignacio Luri, University of Arizona, USA
Hope Schau, University of Arizona, USA

Paper #4: Benevolent Surveillance? Enhancing Efficiency and Employee Safety With AI

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SESSION OVERVIEW

In this session, we highlight evolving issues of consumer agency that emerge from pervasive technology augmentation. Consumers use technology to augment their lives in multifaceted ways to enhance convenience and improve outcomes. For example, technology enables one to shop better and smarter, allowing one to locate desired products and services and to maximize value: setting alerts for new products, sales and promotions. With mass adoption of consumer artificial intelligence, we now have millions of devices like Amazon-Alexa constantly listening, at the ready to assist: adding to grocery lists, delivering curated daily news and providing weather forecasts. The Apple Watch is constantly monitoring users' activity, exercise and sleep and nudging consumers to 'improve' themselves. And, arguably antithetical to the tenets of meditation, Headspace provides users a meditation dashboard showing daily 'streaks', minutes meditated and other such achievements.

With over half of the world's population interacting with code-driven systems (Anderson, Rainie and Luchsinger 2018:1), the rapid influx of AI into the domain of consumption has been one of the most stunning marketing developments in recent time: "digital life is augmenting human capacities and disrupting eons-old human activities" (Anderson et al 2018:1). Advances in computing have enabled complex algorithms to assist in, and shape, a growing number of consumer activities. Increasingly, AI is quantifying consumers who rely on app enabled dashboards of formerly uncodified, idiosyncratic metrics to measure their health, fitness, skills and efficiency.

Proponents of consumer technology proclaim powerful technological capabilities that are built into their products and services create high levels of consumer engagement. Similarly, consumer researchers investigating consumers' use of embedded, even ambient technology arrive at conclusions and recommendations that are consistent with the positive potential of technological influence (Hoffman and Novak 2017). By focusing on the benefits, previous market-

ing scholarship has neglected the ways in which these technologies shape consumer experience and behavior in more problematic ways.

Four papers interrogate the promise and perils of omnipresent technology in consumer life. We offer these presentations in escalating impact of technology on consumer practices: 1) an empirical study of technological augmentation of agentic pursuit of price savings and how the quest for value in exchange may have unforeseen collateral impact, 2) a conceptual overview of dystopian mythologies consumers associate with AI which are largely related to questions of agency, and managerial strategies for mitigating consumer concerns, 3) an empirical investigation of the impact of algorithms and quantification on agency 4) an empirical examination of mandated surveillance through AI in the workplace to enhance workforce efficiency and how differing perceptions of agency arise and make an impact on the effectiveness of the technology deployed. We believe this set of research papers will spark lively conversations about technology and consumer agency.

The Double-Edged Sword of Online Collective Deal Creation

EXTENDED ABSTRACT

U.S. consumers are fond of price promotions with 174 million Americans reported as shopping during 2017's Black Friday and Thanksgiving sales (National Retail Federation 2017). It should come as no surprise that millions of consumers use the internet to learn about price promotions such as Black Friday sales. BigDeals (pseudonym), a consumer-to-consumer platform (Perren and Kozinets, 2018) devoted to identifying price promotions attracts over 10 million monthly users and describes itself as the leading and most trusted online deal-sharing collective. Consumers use the site to go beyond simply learning about available promotions. Members of BigDeals actively participate in its forums in order to construct what they call "deals." Deals are opportunities to purchase a product or service at a lower than listed retail price due to a perceived mistake or loophole. Deals are often achieved by combining multiple promotions across channel members: 1) someone might alert the forum to an attractive sale at a retailer, 2) a fellow user may chime in with a free shipping code and 3) another user might indicate which credit card to use to receive additional cash back.

Given that the primary focus of these collectives is the quest to extract the utmost value from market transactions, prior research suggests that these collectives ruthlessly leverage promotional information to maximize value-in-exchange. We find that these deal hunter collectives have defined boundaries on their market behaviors and meticulously self-police in the interest of market concerns beyond the immediate collective. Using a netnographic analysis, we show that in the unique context of a co-creative collective, moral judgment and moral hypocrisy act to limit the behavior of all actors, including those who render judgment but otherwise enact an illegitimate deal. This creates a novel outcome whereby public judgment has a boomerang effect, reducing or eliminating prevalence of illegitimate deals, and thus implicitly forcing judgers and the entire collective to behave more ethically. We argue that this effect occurs for two reasons. First, public judgment within a group context may lead the group to define and characterize itself as more moral. Consistent with social comparison (Campbell, 1964; Cialdini & Trost,

1998; Gino, Ayal, & Ariely, 2009) and social identity (Gino, Ayal, & Ariely, 2009; Tajfel, 1982) theories, such morality is then assimilated and mirrored, respectively, within the group. Second, public judgment of others within a collaborative collective setting necessarily limits what is discussed. Condemning those that post unethical ideas results in less discovery and creation of unethical deals within the collective. Since the collective is much better than one individual at discovering and creatively developing deal opportunities of any form, such condemnation has the unintended effect of limiting everyone's, including judgers', ability to identify, construct, and enact illegitimate deals.

Our investigation reveals a novel byproduct stemming from previously demonstrated moral hypocrisy effects (Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997; Monin & Merritt, 2012). We show that when hypocritical judgment occurs in a co-productive collective environment the effect extends not only throughout the collective, but importantly indirectly limits the hypocrite's own opportunities. This is noteworthy because moral hypocrisy, by its very nature, rests on a consumer's ability to rationalize their own unethical behavior better than that of others'. Additionally, consumers are prone to forget their own misdeeds (Kouchaki & Gino, 2016) as well as moral rules they have broken (Shu & Gino, 2012; Shu, Gino, & Bazerman, 2011). The ability of a collective to reflect and strengthen a consumer's espoused moral standards in the face of natural predisposition to rationalize their own unethical behavior is significant.

While research shows that emulating (Campbell, 1964; Cialdini & Trost, 1998; Gino, Ayal, & Ariely, 2009) or identifying (Gino, Gu, & Zhong, 2009) with a group can help consumers uphold ethical standards, this is not always the case. Consumers are known to limit their own unethical response only when an out-group member is present (Gino, Gu, & Zhong, 2009) or when acting ethically is salient (Gino, Ayal, & Ariely, 2009). Groups are also known to diffuse responsibility, providing cover for immoral behavior that individuals may otherwise restrain from doing (Diener, Fraser, Beaman, & Kelem, 1976; Latané, 1981). Our findings provide insight into an additional, and possibly more general, mechanism through which groups can uphold ethical behavior. The effect of reflected moral hypocrisy is also notable in that it extends to protect out-group members, who are often exploited at the expense of an in-group (Gino, Ayal, & Ariely, 2009; Opotow, 1990; Reed & Aquino, 2003). While moral responsibility is an element of brand community, it is an in-group behavior (Muniz & O'Guinn, 2001). Some brand communities behave in a socially responsible manner, but this is an idiosyncratic part of their ethos. We suggest that in deal communities maintaining prosocial behavior toward out-groups (e.g. retailers, third party payers, etc.) is necessary for collective sustainability. Curbing consumer exploitation of the market ensures the deal collective does not cut the proverbial sheep's throat.

Our findings provide valuable insight into questionable consumer behaviors, extending and enriching existing understanding (Muncy & Vitell, 1992; Vitell & Muncy, 1992). Some behaviors documented in our investigation, such as taking advantage of price mistakes, can be classified along existing dimensions of the consumer ethics scale such as "passively benefiting at the expense of the seller" (Muncy & Vitell, 1992). Likewise, using expired or counterfeit coupons are examples of "deceptive practices". However, many of the deals described within the collective simply do not fit within existing categorizations of the consumer ethics scale. For instance, stacking deals and coupons from both the retailer and manufacturer in order to make money while purchasing shampoo seems questionable, yet is neither illegal nor immoral. The multiplicity of promotions now available and the sheer crowdsourcing horsepower present in online

deal communities make the likelihood of such opportunities emerging ever more likely. It also points to the importance of developing knowledge of when and how consumers react to such deals, which represent a novel form of ambiguous exchange (Belk, 2005).

Managing for Me, Myself, and AI: Why Mythology Hurts AI Investments

EXTENDED ABSTRACT

What consumers believe a given AI solution can or cannot do for them or others in important domains such as work, leisure, individual freedom, and social wellbeing is also shaped by popular cultural tales and science-fiction books and movies rendering humans as being dominated by artificial intelligence technology (so-called AI dystopias) that, by bringing a host of negative meanings into circulation, can significantly harm a firm's consumer AI investment. For this reason, we argue that explaining the cultural roots and operation of these AI dystopias, as well as developing a set of strategies for successfully combating them, would make a valuable addition to the marketing lexicon as well as to firms seeking to successfully market consumer-facing AI solutions.

However, a seldom discussed risk of consumer AI is its potential to expose companies to a particular type of risk, which we characterize as AI dystopias. Like all consumer experiences, consumer AI experiences are never singular objects or lines of code but complex and evolving social networks comprised of multiple actors, elements, and touchpoints (Lemon and Verhoef 2016). In order for an AI experience to operate effectively, its inherent technological constraints must be reflected in the thoughts and actions of its consumers, who must then adhere to behavioral norms that reinforce the social structures upon which it is built. Amazon's success with Alexa, for instance, is not only a matter of equipping its devices with new Alexa skills. If Amazon wants consumers to "add Alexa to any room," it must also equip consumers with a host of new behavioral skills and capabilities around privacy, leisure, work, and society.

AI dystopias are negative tales and myths about a consumer AI experience that are promulgated by experts, bloggers, journalists, authors, and even competitors. Because they can undermine a consumer's emotional bond with a particular AI solution, they are damaging to a firm's AI investment. But they can also operate as diagnostic tools. Dystopian technology framings around Amazon Echo's family of voice-enabled "Alexa" assistants, for instance, have routinely disparaged Alexa as a harmful invader of privacy and perpetuator of socially problematic biases. Similarly, Tinder's algorithm-enabled dating app has been frequently accused of turning people into sex objects and romantic dates into superficial and often traumatizing experiences. By developing a set of behavioral skills and capabilities for consumers, however, Amazon and Tinder were able to successfully counteract some of these technophobic consumer AI meanings, and their experiences have gained wider marketplace appeal. AI dystopias have also been an issue for many other consumer AI providers including Facebook and Uber.

To explore these issues in greater detail, we draw on research that has examined technology consumption as an emotional identity project - a matter of perceived meaning and cultural mythology than an aggregation of verified evidence (Mick and Fournier 1998; Best and Kellner 2001; Thompson 2004; Kozinets 2007; Giesler 2012). Previous studies investigating "the American relationship with technology" (Kozinets 2007, p. 871; Mick and Fournier 1998), for instance, consistently diagnose an "ambivalent stance" (Thompson 2004, p. 165) toward technologies such as machines, techniques, and processes, alternating between technophilic stories that "present the

current technologies as our salvation" and technophobic narratives that "see the emergent technology as our damnation" (Best and Kellner 2001, p. 155).

When, as this scholarship argues, technology consumption is better understood as an emotional identity project, the marketing success of consumer AI may not merely be a question of a product's generalized capabilities (Goldfarb 2018). Rather, it may be a function of how marketers can foster a consumer AI experience's congruence with extant social norms (e.g., Humphreys 2010). AI dystopias will invariably compete with a company's efforts to emphasize its consumer AI's positive role in serving (rather than undermining) an identity project and related problems and challenges. We refer to these positive meanings, which express a perceived dominance of humans over AI technology, as AI solution myths.

The goal of our paper is to examine how AI dystopias influence the marketing success of consumer AI and to offer a new set of strategies that managers can use to protect their consumer AI investment. Our paper is divided into two larger sections, each answering one key question around the management of consumer AI. First, we review what key AI dystopias (and solutions myths) are in circulation and what mythological traditions they might stem from. After that, we discuss what strategies managers of AI can use to counteract them.

Quantification, Algorithms and Agency

EXTENDED ABSTRACT

Software interfaces are now integral to an increasing array of consumer goods. With the proliferation of the 'internet-of-things' this is only set to increase manifold. Algorithms are the basic building blocks of software and range from simple 'if-then' statements to more complex arrangements in neural networks and artificial intelligence. Consumer experiences then increasingly include interactions with the algorithms that make up software interfaces. The sociologist Madeleine Akrich argues that "like a film script…objects define a framework for action" (Akrich 1994). User facing algorithms are one of the most explicit forms of such scripts which mediate consumer experiences.

More importantly, when products with algorithms are incorporated into consumer practices, these algorithms mediate the practices themselves. In this research we study how algorithms shape the consumer practices into which they are introduced. Bruno Latour gives the example of an angry person who has an intention to seek vengeance, which he terms their program of action (Latour 1994). If this person finds a loaded gun, then their original program of action is mediated by the program of action of the gun (of accelerating metal). Similarly, in our research, we ask how algorithmic programs of action influence consumers' programs of action. We study this in the context of consumers using fitness-tracking devices and apps such as Fitbit, Apple Watch and Strava.

Self-tracking is not new. People have long used pen and paper or measuring tapes for self-tracking. So, in what important ways is algorithmically infused self-tracking different? First, the self-tracking with these devices is highly automated. Once started, data is constantly and automatically generated. Second, the output of these devices is highly number focused. With a pen and paper, a person can reflect on their experience in a more holistic manner. With a measuring tape this reflection is brought down to a single number. Now, with algorithmic devices the quantity of numbers is multiplied with a variety of statistics being generated. Lastly, these devices are animated. That is, they 'speak' to the user through data visualizations and algorithmic notifications. Whereas previous research has looked at information technology as augmenting the capabilities of the consumer (Jenkins and Denegri-Knott, 2017), we draw attention to the dynamics of and negotiations in such augmentation and foreground the user interactions with algorithms.

Theoretically, we draw on actor-network theory (Latour 2005), practice theory (Schatzki 1996, 2002) and speech act theory (Austin, 1962). In his articulation of practice theory, Theodore Schatzki makes a distinction between dispersed and integrated practices (Schatzki 1996). For instance, in the integrated practice of giving a lecture, the dispersed practices of explaining and questioning play a role. Dispersed practices can be parts of several different integrated practices. Further, Schatzki sees practices as a nexus of doings and sayings organized by understandings, rules and what he calls teleoaffective structures (Schatzki 1996, 2002). Teleoaffective structures refers to the normative ends and emotions associated with a practice. Lastly, we draw on the concept of performativity (Austin 1962), which in speech act theory refers to the ability of utterances to create facts. That is, words do not just describe the world, they often create things in the world. For instance, when a pastor says, 'I pronounce you husband and wife', they create something.

Performativity is at play when algorithms sense, classify and quantify the world and represent them to the user as data visualizations and user notifications. The effect of this algorithmic performativity is to create facts about the world. However, it is important to note that algorithms are created within the affordances of computational constraints, especially that of seeing the world as numbers. While working within these constraints, algorithms introduce new dispersed practices into the consumer's integrated practices in such a way that it often creates tensions with the original integrated practice. That is, the teleoaffective structure of the practice is changed because of the inclusion of the algorithm.

We find the combined effect of quantification and networked sociality orchestrated by algorithms impacts consumer agency in novel and powerful ways. The most common impact is consumers' acceptance of algorithm anointed metrics as a legitimate way to relate to their practices and themselves. Further, when consumers introduce algorithmic devices into their practices, they pay more attention to those aspects of the practice which are privileged by the algorithm. The algorithm is thus implicated in shaping consumer practices according to its own logics and affordances. In contrast to marketing messages which promote tracking devices as a form of consumer empowerment, we show that algorithmic interactions involve important negotiations of consumer agency with the algorithms 'program of action'.

Benevolent Surveillance? Enhancing Efficiency and Employee Safety with AI

EXTENDED ABSTRACT

The dominant perspective in research on the quantified self assumes, and sometimes even asserts, that monitoring and measuring of the body and behavior are explicitly part of self-improvement (Lupton 2016): we monitor and measure, so we can improve. The quantified self has been largely characterized as a movement toward self-awareness and self-knowledge. It often treats the choices AI programmers made as to what is monitored and how it is measured as value neutral (Whitson 2013). In sharp contrast, the Foucauldian perspective treats AI surveillance as a tool for corporate and institutional control and shows how the scientization of data strategically strips people of their agency, turning them in to data specimens (Abrams 2004). Likely, the reality is somewhere in between agency and control.

Advances in wearable technology, wireless communications, analytic software and mobile content can be integrated powerfully in workplace AI with the potential to revolutionize contemporary workplaces. Workplace AI claims to transform health and safety practices by making predictive, adaptable and personal behavioral recommendations (Brougham and Haar 2018). AI technology makes it possible to measure and record all the physical behavior of an individual worker over a short period (a day) or a longer period (a week, month or year), link them to efficiency metrics like throughput, output and project advancement, and observe patterns.

Workplace AI benefits the organization in the form of greater efficiency, lower absenteeism due to injury, lower insurance costs and worker compensation claims (Brynjolfsson, Rock, and Syverson 2018). Perhaps more pointedly, workplace AI can locate patterns of employee efficiency (what behaviors lead to metric attainment) which can lead to codifying specific practice regimes that are most likely to yield success and surveilling employees to ensure they are following the successful regimes. Workplace AI benefits individual workers in terms of health and safety, but at the expense considerable privacy and task autonomy. Surveilled employees have less agency in their job performance. Unions are somewhat ambiguous about the use of AI technology in the workplace. On the one hand they value the health and safety benefits it affords workers, but on the other they are concerned about invasions of privacy by means of surveillance, the loss of agency due to potentially aggressive nudging of employees into specific codified behavior regimes and that greater productivity gains are not necessarily rewarded by compensation.

We investigate the nexus of consumer AI, created and sold in the domestic sphere for self-enhancement, and AI developed for corporate workforce control. Our data consist of worker data streams and interviews. The data streams are culled from an open-innovation platform that links sensing applications that provide real-time visibility into a workforce to identify, mitigate, and manage risks, ostensibly to prevent workplace injuries. The platform pairs sensors on specific industrial motion tracking wearable sensors with cloud-based analytic software to detect and provide early warning of heightened injury risk. Sometimes using the same sensors, the platform co-opts consumer AI promising enhanced safety and efficiency, turning personal, domestic devices assumed to be created for self-improvement into workplace surveillance tools, quantifying, and more problematically metrifying human behavior in the workplace. Data streams were augmented with interviews conducted with supervisors and line employees of client firms actively using the platform in their daily operations.

The data the platform offers clients are aggregated (a complete overall picture of the movements and physical behavior of the work force), aggregated into divisions, aggregated into functions, aggregated into use patterns (highly successful employees or employees struggling to meet metrics) and individual (a single employee). It is possible to observe movement in space, posture, lifting and carrying behavior, and where necessary advise that worker to change their posture, walking and movement patterns etc, both ostensibly to increase efficiency and to safeguard the physical wellbeing of the individual worker. The current clients of the company include firms in the airline, retail, and manufacturing sectors. The workflow data streams that we will present will be at an aggregate level for an anonymous client company and its labor force, and illustrations of individual patterns will also be anonymous examples. Likewise, interview data will be redacted for client and employee anonymity.

Our preliminary findings suggest that AI does enhance health and safety practices but over time, can decrease employee morale as they perceive their professional agency being eroded. Interestingly, employees utilizing entirely industrial AI devices and apps experienced less morale decline than those where workplace AI co-opted consumer AI devices and apps.

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When Marketing Alienates Consumers

Chair: Klaus Wertenbroch, INSEAD, Singapore

Paper #1: The Dark Side of Microtargeting: Predicting Consumers' Preferences Threatens Their Sense of Free Will

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Klaus Wertenbroch, INSEAD, Singapore
Yonat Zwebner, Interdisciplinary Center (IDC), USA

Paper #2: Calculators for Women: When Identity Appeals Provoke Backlash

Tami Kim, University of Virginia, USA
Leslie John, Harvard Business School, USA
Kate Barasz, IESE, Spain
Mike Norton, Harvard Business School, USA

Paper #3: The Dematerialization of Consumption

Maria Cristina Cito, Bocconi University, Italy
Eugina Leung, Erasmus University, The Netherlands
Gabriele Paolacci, Erasmus University, The Netherlands
Stefano Puntoni, Erasmus University, The Netherlands

Paper #4: The Signature Effect: How Personizing the Fruits of One's Labor Increases Work Motivation and Performance

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Martin Schreier, WU Vienna, Austria
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SESSION OVERVIEW

Choosing and consuming are activities that provide individuals with opportunities to develop and enact their preferences, express who they are (or would like to be), and experience a sense of self-determination in their lives. In contrast, modern marketing, based on economic theory and enabled by technology, primarily aims at efficiency by addressing consumers on the basis of predetermined classifications, using segmentation and product differentiation. Borrowing from Karl Marx, the session asks when marketing may, in fact, alienate consumers. Collectively, the four papers in this session ask how current marketing practices geared to enhance economic efficiency—from standardized production methods, identity appeals/segmentation, the digitization of products and services, to algorithmic microtargeting—can frustrate, or serve, consumers' fundamental human needs to autonomously express, choose, and adapt their identity and preferences on their own terms, not as predetermined by marketing techniques.

Three papers examine consumer reactions to marketers' attempts to enhance efficiency (by microtargeting, segmentation, and product differentiation) that insufficiently address consumers' needs to manage their own preferences and identity. The fourth shows how marketers can enable transactions that counter alienation and enhance opportunities for identity expression.

Schrift et al. address how microtargeting based on machine learning and artificial intelligence may undermine consumer perceptions of free will and autonomy. Drawing consumers' attention to the predictability of their choices threatens their sense of autonomy and prompts them to restore it by choosing non-predicted and therefore non-preferred choice options, a paradoxical effect of microtargeting efforts to offer consumers their most preferred choice options.

Kim at al. demonstrate that identity appeals, a standard segmentation and targeting method, can backfire, alienating the very individuals they aim to attract. That is because consumers are loath to being reduced to a single identity or aspect of their individuality.

The authors explore boundary conditions of this phenomenon, such as when the targeted identity evokes negatively laden stereotypes or membership in marginalized groups.

Cito et al. show how the dematerialization of products (e.g., downloading and streaming versus tangible books, CDs, or DVDs), a modern product differentiation method based on digitization, limits consumers' ability to pursue identity-relevant goals through their consumption activities, in contrast to material consumption goods, which establish a stronger and more physical link with the identity they represent.

Finally, Kaiser et al. take a historically inspired perspective on alienation, pointing to an important linkage between production and consumption at the heart of the value creation process in marketing. Individuals' motivation and performance in production tasks depend on how much they can identify the output of their labor as their own and can experience agency in their work. Even simple acts of personalizing products can enhance both motivation and performance.

Given the growing societal and political scrutiny of the digitalization of marketing, the session will appeal to a broad cross-section of researchers interested in how marketing and technology are affecting fundamental aspects of consumers' selves and identity. While all four papers address aspects of alienation, each provides distinct conceptual and substantive contributions, drawing on social psychology, sociology, economics, and philosophy.

The Dark Side of Microtargeting: Predicting Consumers' Preferences Threatens Their Sense of Free Will

EXTENDED ABSTRACT

The belief in free will and its associated sense of autonomy is a fundamental aspect of intrinsic motivation (e.g., Deci, Koestner, and Ryan 1999; Ryan and Deci 2000). It is directly linked with, and asserted, by individuals' freedom to make choices (Deci, Koestner, and Ryan 1999; Kim et al. 2015). Recent developments in machine learning and artificial intelligence allow marketers to microtarget consumers and predict their choices more accurately and efficiently than ever before. Modern recommendations systems use consumers' demographic characteristics and track their past choices, decision processes and, presumably, even their psychographic characteristics to tailor offers to consumers (Matz et al. 2017; Kosinski et al. 2014, Zwebner and Schrift working paper). Might such attempts to influence and predict individual behavior threaten consumers' sense of free will? If so, why and how will consumers react to such practices?

Philosophers who question the existence of free typically propose two alternative governing principles of nature, which preclude free will, causal determinism and its opposite, indeterminate randomness (Kane 2005). In contrast, we propose and find that consumers wish to experience and perceive their choices as neither random nor deterministic. Specifically, we hypothesize that framing consumers' choices as consistent with their preferences primes consumers to consider their choices are non-random. Not having to attribute their choices to randomness allows consumers to maintain an unperturbed belief in free will. They can view themselves as the causal agents of their choices. In contrast, framing consumers' choices as predictable suggests to consumers that their choices may be predetermined and outside of their control, undermining their belief in free will. Note

that from a normative utility perspective, consistent preferences and predictable preferences are indistinguishable and imply one other.

In Study 1 (N=401) participants freely wrote about what they perceive to be the meaning of being "predictable", "unpredictable", "consistent", or "inconsistent" (manipulated between-subjects). Using Natural Language Processing, we text-analyzed participants' responses. A valence analysis revealed that being consistent produced higher positive valence scores compared to being predictable, and that being unpredictable yielded fewer negative thoughts compared to being inconsistent. The 2 (predictable vs. consistent) x 2 (being vs. not being) interaction was significant. These findings provide initial evidence supporting our claim. Specifically, being predictable implies having a deterministic preference structure. However, being consistent merely implies a non-random preference structure. Thus, while the former threatens perceptions of free will, the latter reinforces it. Consistently, negating these terms (i.e., using the terms "inconsistent" and "unpredictable") reverses the meaning implied and produced opposite patterns.

In Study 2 (N=153) participants first completed a self-explicated conjoint analysis about vacation preferences. After a filler task, participants were asked to choose their most preferred vacation package from three choice sets containing five options each. Prior to choosing, participants assigned to the predictability condition were told that one could predict their impending choices based on the preferences they indicated in the first stage of the study. Participants assigned to the consistency condition were told that one could see how consistent their choices were with their previously stated preferences. Participants' choices in the predictability condition deviated more from their original preferences compared to choices made by participants in the consistency condition.

One could argue that the effect is mainly driven by participants in the consistency condition which are motivated to choose more carefully in order to exhibit consistent behavior in the lab. However, Study 3 (N=167) which included a control condition (in which neither predictability nor consistency were highlighted) alleviated this concern. Specifically, results confirmed that participants' choices in the predictability condition deviated from their originally stated preferences significantly more compared to those in the consistency and control conditions. This study replicated the pattern observed in Study 2 and showed that the effect is driven by the deviation in the predictability condition.

In sum, we find the notion that one's preferences may be predicted is concerning to consumers, threatens their sense of free will, and leads them to deviate from their preferences in order to reassert their sense of free will. However, such effects attenuate when predictability is framed as consistency, because such a frame does not trigger a deterministic view with regards to one's preferences. Our findings suggest how microtargeting activities might be framed to be more, or less, palatable to consumers.

Calculators for Women: When Identity Appeals Provoke Backlash

EXTENDED ABSTRACT

From Chick Beer to Mangria, hand tools "for Women" to dryer sheets "for Men", examples of identity-based labeling—or "identity appeals"—abound. Oftentimes these appeals serve a practical function: increasing attraction from members of the appealed-to population. Indeed, previous research on labeling theory shows that invoking an identity can motivate individuals to conform to characteristics of that identity (Kraut, 1973; Schur, 1971).

In practice, however, the effectiveness of identity appeals has proven more complex. For instance, uproar ensued when BIC released the "Pens for Her" series; Target Inc. faced consumer ire after one store labeled an aisle "Building Sets" and another "Girls' Building Sets". In 2016, Hillary Clinton's supporters appealed to women to support the first female presidential candidate specifically because of their shared gender, but instead provoked backlash from many voters.

Why did these identity appeals go awry? We investigate when and why identity appeals backfire, alienating the very individuals they aim to attract. We posit that identity appeals can induce categorization threat (i.e., being categorized unwillingly into a single identity)—and in turn, backfire—when a) the evoked identity is that of a typically marginalized group and b) the appeal evokes a stereotype about that identity.

Study 1 tested whether identity appeals will backfire when the two categorization threat-inducing factors are present. We distributed (unofficial) campaign materials for Hillary Clinton the summer before the 2016 presidential election. We gave female participants (N=199) the choice between a lower-value sticker or a higher-value button and varied whether the button had an identity appeal ("Candidate for Women"). Note, the identity appeal evoked a stereotype (i.e., Hillary Clinton was stereotyped as a candidate for women during the 2016 presidential election) about a marginalized identity (i.e., women are more marginalized than men). Indeed, most participants in the no appeal condition chose the button over the lower-value sticker (60.8%)—significantly different from chance, p=.04 (not surprising given that the button was more expensive and higher quality). However, when the button featured a slogan using an identity appeal, "Hillary, the Candidate for Women," marginally fewer participants chose the button over the sticker (47.5%), p=.06, forgoing the objectively better-quality product.

Study 2 (N=321) was 2(participant gender: male, female) by 2(identity appeal: yes, no) between-subjects. All participants chose between two calculators to complete math problems. Participants in the no identity appeal condition saw green and purple calculators. Those in the identity appeal condition also saw the same options, except the purple calculator was labeled as "for Men" or "for Women," depending on their gender. We predicted that women would avoid the purple calculator when the "for Women" appeal was affixed, since both factors would be present: the identity appeal evoked a stereotype ("Most women like purple") about a marginalized identity (i.e., women are more marginalized than men). There was a significant interaction between participant gender and identity appeal, p<.001. Fewer female participants chose the purple calculator in the identity appeal condition (24.1%) than those in the no appeal condition (51.1%), p<.001. In contrast, if anything, men were more likely to choose the purple calculator with an appeal to their male identity (47.3%) than without one (31.9%), p=.06.

Study 3 was a 2(participant gender: male, female) by 2(stereotype evocation: yes, no) between-subjects design, and focused on the first factor, testing whether—for identity appeals to backfire—they must pertain to a marginalized identity. Participants (N=600) were presented with two articles (about morals and emotions), and encountered an identity-relevant appeal: female and male participants saw the emotions article labeled for "Women" and "Men" respectively. To manipulate stereotype evocation, half of participants were told that their gender was typically viewed as bad at managing emotions (pretested as credible to both genders). We tested whether—for an identity appeal to backfire—the evoked stereotype must be linked to a marginalized identity by comparing female (a marginalized group) and male (a non-marginalized group) responses. Indeed, there was a

significant interaction, p=.02. Female participants in the stereotype evocation condition were significantly less likely to choose the article on emotions than those in the stereotype non-evocation condition, p=.01. Preference for the article on emotions amongst male participants did not differ whether the emotions stereotype was evoked or not evoked, p=.41. Perceptions of categorization threat also followed the same pattern; differences in article preferences between the stereotype evocation and non-evocation conditions were mediated by categorization threat and moderated by participant gender.

Study 4 provided converging evidence for the first factor. Female participants (N=189) chose between two calculators (green, purple). Those in the identity appeal condition saw the purple calculator with an identity appeal while those in the no appeal condition did not. We also included a trait measure of public regard: people's perceptions of how well-regarded their gender is by others. There was a significant interaction between identity appeal and public regard, p=.02: stereotype-evoking identity appeals backfired only among women who chronically feel that their gender is being marginalized by others.

Study 5 focused on the second factor by manipulating whether the identity appeal evoked a stereotype. Female participants (N=204) chose between two pens (purple, green). Informed by our pretest demonstrating that purple evokes a stereotype ("Most women like purple") while green does not, we varied which color the identity appeal accompanied—either a "purple pen for women" or a "green pen for women." A third, baseline condition excluded identity appeals altogether. At baseline (no appeal condition), 65.6% chose a purple pen; however, far fewer participants chose the purple pen when it bore the label "for Women" (45.8%), p=.02. Importantly, by contrast, the non-stereotype-evoking appeal (i.e., ascribing "for Women" to the green pen) did not backfire: participants were just as likely to choose the green pen when it was paired with an identity appeal (23.5%) relative to when no appeal was made (34.4%), p=.17.

Our work suggests that a mere label can produce unintended downstream consequences: while identity appeals to non-marginalized, non-stereotyped groups can have a neutral or even beneficial effect, identity appeals to other groups have a negative and even backlash effect.

The Dematerialization of Consumption

EXTENDED ABSTRACT

The world is shifting towards the digital realm at an ever-growing pace. Only few years ago, consumers had to buy physical books or DVDs in brick-and-mortar stores. However, these products are dematerializing: they are now mostly invisible and intangible. Dematerialization brings many consumption benefits. For example, with an e-book you can easily resize the font or search within the text. However, despite the indisputable benefits of dematerialization, we propose that consumers may at times prefer material goods over their immaterial counterparts. We also propose that this is the case for consumers who want to reinforce their identity through consumption due to the greater ability of material products to remind their owners' self-concept (i.e. self-verifying ability). In particular, material products have higher self-verifying ability because, compared to their immaterial counterparts, they establish a stronger and more physical link with the identity they represent. According to Pierce's semiotics framework, products can act as "indices", signs with a physical, real connection with what they represent.

We tested our hypothesis that consumers prefer material products under identity-based consumption in 7 studies. The goal of studies 1a-1d is to demonstrate preference for materiality among iden-tity-driven consumers. We tested our key prediction – that strength of identification predicts preference for material products (vs. their immaterial counterparts) – in four studies with different product categories and different measures of strength of identification.

In study 1a (802 participants recruited on MTurk), we tested if consumers' preference for materiality of identity-related products increases with strength of identification. We measured participants' strength of identification as a gamer (self-report), manipulated the identity relevance of a book (gaming vs. cooking book), and asked participants to choose between a material and an immaterial version of the book. Results reveal that consumers' strength of identification increases the preference for materiality of the identity-relevant products: Strong identifiers preferred the material version of the identity-related product, but the immaterial version of the identity-unrelated product. In study 1b (596 participants recruited on Prolific), we tested our key prediction using a behavioral proxy for strength of identification. Specifically, we used the number of hours spent weekly playing videogames (as reported by participants on a separate survey conducted by Prolific) as a proxy for how much participants identified themselves with the identity of gamer. Results confirm the findings of study 1a. In study 1c (514 students from a Dutch university) we provided further evidence on the link between identification and preference for materiality. Participants were asked to imagine being devoted fans of one of two directors (our manipulation). Then we showed participants a movie directed by one of these two directors and measured their preference for obtaining a material (vs. immaterial) copy of the movie. Thus, the movie was either identity-related or unrelated, depending on the match between the manipulated identity and movie shown. We found a preference for materiality only for identity-related movie and not for the other one. In study 1d (401 Prolific participants), we replicated our results with yet a different identity manipulation, which asked participants to name a singer whose work they identified with (vs. that they neither liked nor disliked). In addition, we manipulated the presence of an extra material product (a factor we called "rematerialization"). Participants in the "rematerialization" conditions were told that together with the music album (regardless of whether they chose the physical or the digital version), they would receive a tangible artefact (a physical book about the production of the new album). Participants in the "no-rematerialization" conditions made a choice between the physical and the digital version without receiving any other extra product. The effect replicates even when the target product is accompanied by a separate material good, further demonstrating the robustness of the effect of identity on preference for materiality.

In study 2 we provided first evidence for our proposed process: self-verification. As demonstrated in studies 1a-1d, identity-driven consumers tend to prefer material products. We argue that this occurs because material products have higher self-verifying ability: When consumers buy a product related to their identity (i.e. a book from an author they identify with), they prefer the material version (i.e., a physical copy of the book) instead of the immaterial one (i.e., an e-book) because the material product (the book) is a better reminder of who they are. In study 2 (202 Prolific participants), we demonstrated that material products have higher self-verifying ability than their immaterial counterparts. We asked participants to rate a material vs. an immaterial identity-related product on three different benefits: utilitarian, hedonic and self-verification. We found that a material product allows greater self-verification, higher hedonic value, and lower utilitarian value than its immaterial counterpart.

In study 3 (404 MTurk participants) we tested again the self-verification account using an inference method. We asked participants to infer someone else's identity looking at her physical vs. immate-

rial possessions. We found that the books on a shelf are perceived as better clues into one's identity than e-books in a kindle library.

In study 4 (803 MTurk participants) we further test our process by manipulating the extent to which a product allows self-verification. Thus, we asked participants to imagine buying a book vs. borrowing it (i.e. buying a product is more self-verifying than borrowing it). We found that when products have higher self-verifying ability (i.e., products that could be bought), consumers prefer the physical version of the identity-related products. When products have lower self-verifying ability (i.e., products that could only be borrowed), the preference for materiality disappears.

In sum, the studies highlight that the transition from material to digital products is likely to have a dark side for consumers, who find it harder to fulfil identity goals through consumption in the absence of material products.

The Signature Effect: How Personizing the Fruits of One's Labor Increases Work Motivation and Performance

EXTENDED ABSTRACT

If you open the hood of a Mercedes-Benz AMG you can sense their "One Man – One Engine" philosophy by inspecting the signature of the engineer who was responsible for the assembly. Similarly, Known Supply garments include a tag with the laborer's signature on it, and Lush Cosmetics even print stickers with a picture and name of the creator along with the date of production on their products. Other companies like the snack manufacturer Burts Chips, for example, go even further and feature rich personal information on their producers on the products' packaging. These examples highlight that marketers seem to have (re-)discovered the value of making the individual producer and the fruits of their labor, the product, more personal by revealing the respective individual producer's identity at the point of purchase.

While customers have always had this type of informational detail when interacting with individual craftsmen (think of the tailor making your suit) or farmers (think of the farmer selling potatoes at the local market), recent technological advancements have facilitated such personizing strategies in mass production settings, making the tracing back to the origin of a given product's production process feasible at scale. But what are the effects of this trend? Recent research suggests that making the individual producer more personal produce favorable effects among consumers; i.e., they prefer to buy products from firms where they know and can thus better connect to the individual producer (Fuchs et al. 2018).

In this research, we take a different perspective: Instead of looking at what such personizing treatments do with consumers, we investigate how making the individual producer more personal affects the producer. Specifically, we ask whether and why personizing the fruits of one's labor affects work performance. We define our focal term *personizing* as providing personal information about the producer of a given product on the product or the product's packaging. If we think of individual producers as brands, this is not much unlike of what the original meaning of the word branding intended to convey (think of hot branding livestock to identify the owner).

We theorize that branding a product with one's identity once finished increases work motivation through feelings of de-objectification. Objectification denotes perceiving or treating other people as objects. When a person is objectified, she is treated as a means to one's ends and deprived of her essential human capacities such as agency, autonomy, and self-determination (Frederickson and Roberts 1997; Nussbaum 1995). For our context, we use the term de-

objectification to describe a producer's feelings of being appreciated and valued as a unique human being rather than feeling like an interchangeable worker. By having been granted the possibility to visibly brand the fruits of one's labor with one's identity, ceteris paribus, we argue that one and the same task becomes more personal, less objectified, and hence more meaningful. This process, in turn, should increase work motivation and performance.

Four studies in the lab and in the field demonstrate the existence of this effect. Alternative explanations including mere accountability concerns or self-identity primes are ruled out. In study 1, museum visitors of an exhibition about artisanal handicraft at an renowned museum of Applied Arts were invited to decorate a pre-cut Christmas. Participants (n = 59) were truthfully told that their angels would be prominently exhibited in the museum upon completion of the study. The study was a two-cell between-subjects design. The focal manipulation was whether participants put their name or signature on the angel or not. The quality of the decorated angels, as judged by a panel of three expert raters, served as dependent variable. Findings confirmed our prediction: When museum visitors branded the product with their name, quality was significantly higher compared to the control condition (non-signed angels).

Study 2 (n = 230) and study 3 (n = 152) replicate and extent this effect in the field. Amazon's micro-labor platform Mechanical Turk serves as field setting. Here, we can more convincingly talk about work, and not leisure (in the museum study, participants voluntarily completed a drawing task in their leisure). Workers were asked to produce three drawings an alien (i.e., a creative task, study 2) or five drawings of a sheep (i.e., a mundane task, study 3), respectively. The manipulation was whether participants signed their drawings or not. Findings show that our basic effect extends to a setting where higher quality is presumably related to taking higher risks (drawing an alien is used in creativity tests and outcomes of such highly creative tasks can either be seen as great or awkward) and also to mundane, more repetitive task (in study 3, participants were asked to draw five sheep; we did not observe any treatment x replicate interaction).

Finally, study 4 (n = 121, undergraduate students) confirms our proposed de-objectification account. The study was a two group within-subjects experiment. Participants were asked to produce two snow globes, one of them signed, the other one not (participants were asked to put an ID on the globe instead; the order of the task was counterbalanced). Findings show that participants feel less objectified regarding the signed and personized globe compared to the non-signed globe. Participants also reported that the signed globe was more enjoyable to work on. Finally, independent judges rated the quality of the signed and personized snow globes more favorably. Feelings of de-objectification mediate the signature effect on product quality.

Taken together, four studies highlight that certain marketing strategies aimed at producing favorable effects among consumers can also effect changes in the organization itself. Making the individual producer and the fruits of his or her labor, the product, more personal at the point-of-purchase does not only affect consumer preferences (Fuchs et al. 2018) but, as demonstrated in the present research, also increase work motivation of the personized producers. More generally, our research contributes to the literature on alienation of consumers and producers and interventions about how to make work and consumption more meaningful (Campbell 2005; Grant et al. 2007).

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The Machine Age of Consumer Research:
How Robot-Based Expression Modalities Alter Perception and Choice

Chair: Christian Hildebrand, University of St. Gallen, Switzerland

Paper #1: Mistaking Minds and Machines: How Speech Affects Dehumanization and Anthropomorphism

Juliana Schroeder, University of California Berkeley, USA
Nicholas Epley, University of Chicago, USA

Paper #2: Robot or Human? How Bodies and Minds Shape Consumer Reactions to Human-Like Robots

Noah Castelo, University of Alberta, Canada
Bernd Schmitt, Columbia University, USA
Miklos Sarvary, Columbia University, USA

Paper #3: Conversational Interfaces as Persuasion Instruments: Implications for Consumer Choice and Brand Perceptions

Anouk Bergner, University of St. Gallen, Switzerland
Christian Hildebrand, University of St. Gallen, Switzerland
Gerald Häubl, University of Alberta, Canada

Paper #4: Blaming the Bot: Anthropomorphism Exacerbates Negative Reponses from Angry Customers

Rhonda Hadi, University of Oxford, UK
Cammy Crolic, University of Oxford, UK
Felipe Thomaz, University of Oxford, UK
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SESSION OVERVIEW

Recent advances in artificial intelligence and natural language processing are giving rise to technology that can appear progressively more human-like, both physically and emotionally, bringing us closer to Turing's (1950) definition of machine intelligence as the inability to discern an interaction with the machine from one with another human being. From next-generation digital voice assistants (such as Amazon Alexa or Siri) to realistic sounding and looking humanoid robots employed as news anchors or hotel staff (Forbes, 2019), human-like technologies permeate through the fabric of consumers' everyday lives. However, whether, how, and to which extent these novel expression modalities alter fundamental perceptions of humanness, consumer choice, and the brands providing such technologies remains unclear.

The goal of this special session is to shed light on a burgeoning field of research on how consumers perceive humanness in non-human agents and the psychological consequences of consumers' engagement with such technologies. The session will be comprised of four papers that explore two central research streams:

1. Mind perception in human-machine interaction
2. Anthropomorphic agents in consumer-firm interactions

The first two papers in this session explore the first stream. Schroeder and Epley explore what cues make people mistake a human for a machine, or a machine for a human. They find that human-like voices are particularly important for conveying the humanness of a communicator, in comparison to other (e.g. visual) cues. Next, Castelo, Schmitt, and Sarvary explore the consequences of robots possessing a human-like *mind* based on expressions of autonomy and emotional ability. They find that increasing the belief that social robots can have minds increases empathy for – and valuation of – robots.

The third and fourth papers explore the second research stream, focusing on the downstream consequences of anthropomorphized technology. Bergner, Hildebrand, and Häubl demonstrate the effects of conversational interfaces on brand perceptions and purchase decisions. They show that incorporating such interfaces into the shopping process promotes more intimate consumer-brand relationships and increases consumers' inclination to choose premium offers compared to traditional interfaces. Finally, the session concludes with work by Hadi, Crolic, Thomaz and Stephen, who investigate the interplay between chatbot anthropomorphism and anger in a customer-service context. The authors find that cues of humanness can severely backfire such that angry consumers are less satisfied when addressed by anthropomorphic (versus non-anthropomorphic) chatbots, and this effect even extends to company evaluations and purchase intentions.

This special session contributes to the conference by showcasing research that addresses fundamental questions on how technology-mediated expression modalities can alter perceptions of humanness and the type of choices that consumer make in response to using these technologies. The papers in this session span multiple disciplines from the psychology of mind to computer science and the communication sciences. We hope that this session helps to inspire more scholarly work in this fast-growing field of interdisciplinary academic research.

Mistaking Minds and Machines: How Speech Affects Dehumanization and Anthropomorphism

EXTENDED ABSTRACT

Alan Turing (1950) created a famous benchmark for determining whether a computer can "think:" when it can convince a majority of people that they are interacting with another person instead of a machine (i.e., the Turing test). One thing that makes the Turing Test particularly difficult is that it occurs in the written medium, a dehumanizing space in which little is known about the communicator other than the words they express. Presumably, adding humanizing cues to the written medium may make people more likely to infer that the communicator is human—but which cues in language most clearly convey humanness?

This question is critically important because the modern world has become a living Turing Test, where people must constantly infer whether they are interacting with a human or machine. For example, customer service agents, social media users, and even secretaries are often automated chatbots instead of living humans. Moreover, newly developed artificial intelligence such as "deepfake" and Google's Duplex voice assistant now have convincingly human-like voices. Given this trajectory, future machines are likely to have many humanlike characteristics (voice, faces, and so on), leading to increasing difficulty in assessing whether one's interaction partner is a human or machine.

Prior experiments have tested how language cues humanize a communicator by manipulating the communication medium by which a communicator is observed, and measuring resulting perceptions of the communicator's mental capacities (Hall & Schmid Mast, 2007; Kruger, Epley, Parker, & Ng, 2005; Schroeder & Epley, 2015; Schroeder, Kardas, & Epley, 2017). Results indicate that communicators are perceived as having stronger mental capacity (and thereby humanized) when their message is heard (via audio-clip) or seen (via videotape) versus when read (via text). Interestingly, *seeing* a communicator in addition to hearing him or her does not meaningfully

influence assessments. This suggests that the human voice may be particularly important for humanizing a communicator. Supporting this idea, adding a humanlike voice to computerized agents increases anthropomorphism (Nass & Brave, 2005; Takayama & Nass, 2008; Waytz, Heafner, & Epley, 2014). Moreover, observers can infer a speaker's mental states even via short vocal bursts (which lack semantic content; McAleer, Todorov, & Belin, 2014; Scherer, Banse, & Wallbot, 2001; Weisbuch, Pauker, & Ambady, 2009). These findings led us to predict that the presence of a humanlike voice may particularly enhance perceptions that an agent is human.

The current paper presents four experiments testing whether adding (or removing) human voice from an agent influences perceptions of whether it is a machine or person—and compares the effect of voice to other cues (e.g., face). In Experiment 1, 647 observers observed one of 40 possible videos of communicators talking about positive or negative emotional experiences and subsequently guessed whether the statement had been created by a "human or computer." They observed the statement in one of four experimental conditions: audiovisual (watching a communicator's video), audio (listening to the video on black screen), subtitled-video (sound removed), or text (reading the subtitles only). As expected, observers who read the speeches were less likely to believe it was created by a human (text condition; M=53.6%, SD=50.0%) than observers who listened to them (M=80.8%, SD=39.5%), $t(627)$=5.29, p<.01, d=0.42, but adding visual cues to either condition (text or audio) did not meaningfully increase perceived humanness (subtitled-video condition; M=60.7%, SD=49.0%; audiovisual condition; M=71.6%, SD=45.2%).

Experiment 2 next tested the inverse question by using computer-generated statements (from an online "postmodernism generator") that were read aloud by ten human communicators. Observers were assigned to one of the same four experimental conditions (audiovisual, audio, subtitled-video, or text) and made the same estimate. Replicating Experiment 1, observers who listened to the speeches were more likely to guess the script was created by a human (M=60.0%, SD=49.4%) than did those who read identical speeches (M=32.3%, SD=47.1%), t(239)=3.14, p<.01, d=0.41. Adding visual cues did not significantly increase perceived humanness (subtitled-video: M=39.3%, SD=49.3%; audiovisual: M=40.0%, SD=49.4%); in fact, it unexpectedly decreased it in the audiovisual condition.

Experiment 3 compared whether humanness perceptions change based on the type of text presented—whether a written statement or transcript. 18 communicators both spoke and write about their job credentials. 273 observers either read the written statements, transcribed-speeches, or listened to spoken statements. Observers who listened to the statements were more likely to believe it was created by a human (M=79.1%, SD=40.9%) than did those who read them transcribed (M=55.9%, SD=49.9%), t(270)=3.34, p<.01, d=0.41, or read the written statements (M=59.6%, SD=49.3%), t(270)=2.74, p=.01, d=0.33.

Finally, Experiment 4 manipulated vocal characteristics by asking communicators to speak aloud written statements either "mindfully" (e.g., "try to convey the communicators' thoughts and feelings in your voice) or "mindlessly" (e.g., "read the words with little feeling"). Observers (n=300) either listened to the mindful voices, listened to the mindless voices, or read the written statements. More observers guessed that the essay was created by a human when they listened to the mindful voices (M=65.0%, SE=4.6%) than when they read the text (M=47.2%, SE=6.5%), $\chi^2(1,180)$=5.55, p=.02, φ=0.18, or listened to mindless voices (M=50.3%, SE=4.6%), $\chi^2(1,240)$=5.52, p=.02, φ=0.15. The text and mindless voice conditions did not differ from each other, $\chi^2(1,180)$=0.18, p>.10. An analysis of the para-

linguistic cues in the mindful versus mindless voices indicated that variance in communicators' pitch (i.e., their intonation) mediated the voice manipulation on assessments of humanness.

These experiments indicate that humanlike voices are particularly important for conveying the humanness of a communicator. Adding a humanlike voice to computer-generated text increased the tendency to infer that it was actually created by a real person, whereas removing a voice from human-generated speech increased the tendency to presume the content was actually created by a computer. Experiment 4 further suggests a reason why voice is humanizing—variance in the paralinguistic cues in a voice such as intonation may convey an active, human-like mind to an observer. This research contributes to understanding how people perceive humanness in ambiguous agents, with implications for how to design technology to enhance humanness.

Robot or Human? How Bodies and Minds Shape Consumer Reactions to Human-Like Robots

EXTENDED ABSTRACT

Social robots – intelligent, physically embodied machines that can sense and manipulate their environment, perform tasks autonomously, and engage in social interactions – are becoming increasingly prevalent in many domains of consumer behavior (Simon 2018). Consumers can purchase social robots that perform chores, engage and monitor young and elderly people, and act as companions and assistants (Gibbs 2016). Outside the home, social robots are being used in many contexts including retail stores, restaurants, hotels, and hospitals (Dass 2017; Nguyen 2016). Some of these robots are extremely human-like in their physical appearance, which consumers often find unsettling and creepy (Wang, Lilienfeld, and Rochat 2015). These negative affective reactions limit the usefulness of social robots and their ability to provide value to consumers and firms.

We propose that increasing the perception that robots with human-like physical appearances also have human-like *minds* will make them seem more useful and make consumers more comfortable with them, ultimately increasing their value to consumers and firms. This prediction is based on the ideas that (1) having a mind makes robots capable of having empathy for humans, which facilitates social interactions and therefore help social robots achieve their intended purpose, and (2) having a mind is congruent with a human-like appearance, and such congruence increases positive affect.

In Study 1, 100 MTurk participants watched a video arguing either that robots could or could not have human-like minds, by describing the philosophical positions of physicalism or dualism respectively. Those who watched the video arguing that robots could have minds agreed that robots could have more a human-like mind (M = 6.3 vs. M = 1.8, p < .001), evaluated companies employing robots more positively (M = 4.9 vs. M = 4.1, p = .027), and were more likely to donate to a charity promoting the development of human-like robots (65% donated vs. 44%, p = .074). These results suggest that perceiving robots as having the capacity for a human-like mind increases consumers' valuation of robots.

Minds are usually perceived along two dimensions: agency (or autonomy) and emotional experience (Waytz et al. 2010)however, always ascribe minds to other people, and sometimes ascribe minds to non-people (e.g. God, gadgets. Study 2 therefore manipulated perceptions of these capacities in robots in a 2 x 2 design. 282 MTurk participants were shown a highly human-like robot and were informed that these kinds of robots could either (1) experience emotions like humans do but not make autonomous decisions; (2) make autonomous decisions like humans do but not experience emotions;

(3) have both capacities, or; (4) have neither capacity. As a measure of usefulness, we asked how useful and competent this kind of robot seemed. As a measure of comfort, we asked participants how comfortable they would be interacting with this kind of robot.

2x2 ANOVA revealed that the manipulations were effective. The robot seemed more useful in each of the three mind conditions than in the no mind condition. Participants were least comfortable with mindless robots, non-significantly more comfortable with robots having either autonomy or emotion alone, and significantly more comfortable with robots having a complete mind. Having both dimensions of mind therefore seems important for increasing both the perceived usefulness and consumers' comfort with human-like robots.

In Study 3, we tested whether the effects of mind perception differ depending on how human-like the robot looks and whether perceived empathy can explain these effects. 300 MTurk participants were assigned to a 2 (mind vs. no mind) x 2 (low vs. high human-likeness) design. Mind perception was manipulated using the videos from Study 1 and explaining that mind refers to autonomy and emotion specifically. We again measured comfort with and perceived usefulness of the robot, as well as participants' willingness to shop in a store where the robot is employed. Finally, to measure empathy, we asked participants' if they believed that robots could understand what they are thinking and whether robots would feel sympathy for them if they were suffering.

Mind perception and human-likeness interacted in shaping comfort ($F(1,292) = 9.29$, $p = .002$). Having a mind *decreased* comfort with the low human-likeness robot ($M_{mind} = 5.28$, $M_{no\_mind} = 6.62$, $p = .002$) but directionally *increased* comfort with the high human-likeness robot ($M_{mind} = 4.38$, $M_{no\_mind} = 3.86$, $p = .222$). This supports the idea that congruence between physical and mental human-likeness can increase comfort with robots. Usefulness was impacted only by mind perception ($F(1,292) = 11.60$, $p < .001$). Both robots seemed significantly more useful when they had a mind. Usefulness also had a stronger effect on willingness to shop with the robot ($\beta = .56$, $p < .001$) than comfort did ($\beta = .31$, $p < .001$).

Mind perception increased both the robots' perceived ability to take a human's perspective ($F(1,295) = 18.92$, $p < .001$) and to have sympathy for humans ($F(1,295) = 32.70$, $p < .001$). Neither human-likeness nor the interaction affected either form of empathy (F's < 2.44, p's > .104). The effect of mind perception on usefulness was mediated by the robots' perceived empathy ($\beta = .62$, 95% CI = [.37, .92]).

Robots are in fact acquiring increasing levels of autonomy and emotional abilities (Beer, Fisk, and Rogers 2014; Picard 2011). While this acquisition of a human-like "mind" may succeed in making robots objectively more useful, it may also make consumers uncomfortable if having such abilities is not congruent with the robot's physical appearance. The creators and marketers of social robots should therefore consider how both physical and mental human-likeness together contribute to the value that such robots can provide.

Conversational Interfaces as Persuasion Instruments: Implications for Consumer Choice and Brand Perceptions

EXTENDED ABSTRACT

Advances in natural language processing and the adoption of conversational interfaces gradually transform how consumers interact with firms (BI Intelligence 2016; Dale 2016; Hirschberg and Manning 2015). The use of messenger systems as a new interaction paradigm between human consumers and intelligent bots has been declared as the "next operating system in commerce" (Suri, Elia, and van Hillegersberg 2017; The Economist 2016) and is changing how humans search, shop, and express their preferences (Feldman, Goldenberg, and Netzer 2010; Tang and Guo 2013).

Research on the impact of these novel forms of conversational interaction modalities on consumers is both scarce and predominantly concerned with design and technology-related issues rather than the consequences for consumer behavior. Specifically, the majority of prior work examined either factors related to optimizing system design features (Landis 2014; Lokman and Zain 2010), user perceptions and acceptance (Boden et al. 2006; Comendador et al. 2015), or the ability for unsupervised learning through user interactions (Serban et al. 2017).

The current work examines how conversational interfaces can systematically alter consumer-firm relationships and how key interface properties (e.g., the capacity to take turns, the extent of system autonomy, the extent of anthropomorphism, and linguistic formality) can impact consumer brand perceptions and choice. Based on four incentive-compatible experiments, we show that consumers perceive a conversational interface as substantially more human-like compared to traditional interfaces, and that this increase in humanness creates more intimate consumer-brand relationships, ultimately enhancing the effectiveness of persuasion attempts.

Study 1 examined how key structural properties of conversational interfaces (i.e., the ability to take turns and the extent of system autonomy) influence their perceived humanness and consumer brand perceptions. Participants (N=226) were randomly assigned to the conditions of a 2 (presence vs. absence of turn-taking) × 2 (high vs. low system autonomy) between-subjects design and completed a simple choice task in a design context. In the turn-taking present condition, the conversational interface interacted in a sequential question-answer exchange with participants, while in the turn-taking absent condition the interface presented all options simultaneously. In the high-autonomy condition, the interface proactively advanced to the next question while in the low-autonomy condition participants controlled the pace of the interaction. We assessed the perceived humanness of the system (e.g., "This configuration system has human properties", 7-point Likert scale; α_{human} =.96) and consumers' brand perceptions (using a thought-listing task). In support of our theorizing, we find that both turn-taking and high system autonomy significantly increased the perceived humanness of the interface ($M_{TurnTaking\_Present}$=4.28, $M_{TurnTaking\_Absent}$=3.52; $F(2, 222)$=10.561, p<.01; $M_{SystemAutonomy\_High}$=4.15, $M_{SystemAutonomy\_Low}$=3.68; $F(2, 222)$=4.137, p<.05). The interaction between these factors was non-significant ($F(1, 222)$=0.06, p>.80), indicating that they act independently to alter perceived humanness. Furthermore, both turn-taking and high system autonomy led to more favorable brand evaluations ($M_{TurnTaking\_Present}$=2.64, $M_{TurnTaking\_Absent}$=0.53; $F(2, 222)$=15.522, p<.001; $M_{SystemAutonomy\_High}$=2.47, $M_{SystemAutonomy\_Low}$=0.76; $F(2, 222)$=10.202, p<.01). The interaction was non-significant ($F(2, 222)$=0.212, p=.64), suggesting that these two properties operate independently.

Study 2 more directly assessed whether a conversational interface is perceived as more human-like and promotes a more intimate consumer-brand relationship compared to a traditional interface. We developed a conversational rental car interface based on the flowXO technology (used across all following studies). 236 regular car rental customers were recruited (M_{Age}=37.14, SD_{Age}=11.26, 49% females) and randomly assigned to either a traditional car rental interface or a conversational interface. Participants in both conditions answered the same set of questions (pick-up/return location, time/date, vehicle class), but indicated their preferences via a chat console to a conversational bot in the latter. After completing the rental task, par-

ticipants rated the perceived humanness of the system (e.g., "This configuration system has human properties", 7-point Likert scale; α_{human}=.96) and how intimately they felt connected to the brand (e.g., "I feel like AI.Rental really cares about me", 7-point Likert scale; $\alpha_{BrandIntimacy}$=.92). In line with our prediction, consumers perceived the conversational interface as significantly more human-like than the traditional interface ($M_{Conversational}$=4.89, $M_{Traditional}$=3.14; t(234)=7.654, p<.001). Moreover, they reported greater intimacy with the brand ($M_{Conversational}$=4.42, $M_{Traditional}$=3.91; t(234)=2.248, p<.001), with the effect on brand intimacy being significantly mediated by perceptions of humanness (5000 bootstrap resamples; $CI_{95\%}$=[.86;1.59]).

Study 3 investigated whether greater intimacy can be induced by altering the linguistic formality employed by the system (cf. Ludwig et al. 2013). 214 regular car rental customers were randomly assigned to either a traditional booking interface, a conversational interface using a formal communication style, or a conversational interface using an informal communication style. A one-way ANOVA revealed a significant effect on both the perceived humanness of the system (F(2,214)=26.87, p<.001) and perceptions of brand intimacy (F(2, 214)=4.283, p<.05). Follow-up contrasts revealed that the more informal communication style was perceived as more human-like compared to both the interface using a more formal communication style ($M_{Conversational\_informal}$=5.15, $M_{Conversational\_formal}$=4.49; t(214)=2.239, p=.07) and the traditional interface ($M_{Traditional}$=3.11; t(214)=7.198, p<.001). The findings for brand intimacy mirrored those on perceived humanness and replicated the pattern of mediation results shown in Study 2.

Study 4 examined the downstream consequences of using a conversational interface on consumer choice. The results show, for instance, that consumers are significantly more likely to accept a costly fuel service upgrade from a conversational compared to a traditional interface ($P_{Conversational}$=47.4%, $P_{Traditional}$=29.2%; z(257)=2.257, p<.05) and that this effect is amplified when the interface is personalized toward participants (matching participants' gender and the first letter of their first name) ($P_{ConversationalPersonalized}$=54.5%, $P_{Conversational\_Not-Personalized}$=44.1%). These findings generalize across a range of other rental-car upgrades (e.g., pre-paid fuel option, GPS, wifi) ($P_{Conversational}$=42.6%, $P_{Traditional}$=25.4%; F(1,157)=10.13, p<.001).

This research is the first to investigate the role of conversational interfaces as "persuasion" instruments in the context of consumer decision making. It shows that such interfaces can systematically alter brand perceptions and consumers' susceptibility to persuasion attempts. The findings of this research advance our understanding of consumers preference construction in that they demonstrate that, compared to using traditional interfaces, expressing one's preferences through interactive, dialogue-based interfaces with non-human agents systematically alters how consumers respond to market offerings.

Blaming the Bot: Anthropomorphism Exacerbates Negative Reponses from Angry Customers

EXTENDED ABSTRACT

The global chatbot market will exceed $1.34 billion by 2024 (Wiggers 2018), and chatbots are predicted to power 85% of all customer service interactions by 2020 (Hinds 2018). Some industry voices suggest chatbots will both improve customer service and reduce costs (De 2018), while others believe chatbots will harm customer service (Kaneshige 2018). Interestingly, many companies choose to humanize their customer service chatbots (giving them avatars and a name). However, little is known about how anthropomorphism influences consumer responses to customer chatbots. When is anthropomorphizing a customer service chatbot a good or bad idea?

Anthropomorphism is the attribution of human-like characteristics to non-human agents and objects (Epley, Waytz and Cacioppo 2007). It can be induced through visual human-like cues, including the use of avatars (virtual characters that can be used as company representatives; Redmond 2002).

Consumers attribute a certain level of agency to anthropomorphic entities, perceiving them to be capable planning and acting in a deliberate manner (Gray, Gray and Wegner 2007; Waytz et al. 2010). Anthropomorphism increases expectations that the agent has abilities such as emotion recognition, planning, and communication (Gray, et al. 2007). These heightened perceptions can lead to an expectancy violation if the anthropomorphic entity does not perform in the agentic manner that it's human resemblance would imply (Waytz et al. 2010). This negative disconfirmation results in feelings of dissatisfaction (Sundar and Noseworthy 2016), ultimately harming purchase intention and company evaluations (Cardello and Sawyer 1992).

Importantly, angry consumers are especially likely to suffer when another's performance falls short of expectations (Roseman 1984) because anger evokes an action-orientation (Martin at al. 2000). Even incidental anger increases the tendency to hold others responsible for outcomes (Keltner et al. 1993) and respond punitively towards them (Lerner and Keltner 2000). Thus, we propose that for angry customers, chatbot anthropomorphism will harm customer satisfaction and downstream variables, and this negative effect is mediated by expectancy violations. We find support for our hypotheses across four studies.

Study 1 analyzed a large dataset from live consumer interactions with a T-Mobile chatbot to examine whether anthropomorphism influenced customer satisfaction. The sample consisted of 1,645,098 consumer inputs from 461,689 unique consumer help sessions, resulting in 34,629 satisfaction ratings between one and five-stars. Automated Natural Language Processing was used to score consumers' language for social/relational speech, positive/negative emotion, anxiety, anger, and frequency of using the chatbot's name in conversation (as a proxy for *user-perceived* chatbot anthropomorphism). The two-stage Ordinal Regression (Heckman Correction for selection to provide a rating) revealed that bot technical failure, and longer conversations increases likelihood of feedback ratings. There was a positive main effect of bot anthropomorphism and consumers' social language on satisfaction ratings. Importantly, there was a strong negative interaction of anthropomorphism and consumer anger on satisfaction. Thus, anthropomorphism drives positive consumer satisfaction, except in angry consumers, where it had a drastic negative effect.

A series of three follow-up experiments tested this effect under more controlled experimental settings, allowing us to infer a causality and confirm the effect was not being driven by any idiosyncratic features of the chatbot (e.g., gender or expression).

Study 2 tested the causal effects of anger and chatbot anthropomorphism on satisfaction using a 2(Scenario: neutral versus anger) by 2(Chatbot: control versus anthropomorphic) between-subjects design. 197 MTurk participants read a scenario about receiving a broken camera, chatted with a customer service agent to resolve the issue, then rated their satisfaction with the interaction using a 5-star rating system. Those in the anger condition read a scenario designed to evoke anger, while those in the neutral condition read the same scenario with the anger-evoking details omitted. Then, those in the control condition interacted with an "Automated Customer Service" chatbot in a simulated interaction. In the anthropomorphized condition, participants interacted with "Jamie" who was depicted with

a gender- and expression-neutral avatar (confirmed via pretests). ANOVA results demonstrated a significant interaction of anthropomorphism and anger on participants' satisfaction with the service interaction ($F(1,193)=5.26$, $p=.02$). As predicted, angry consumers reported lower overall satisfaction when the chatbot was anthropomorphic than when it was not ($F(1,193)=33.45$, $p<.001$).

Study 3 used a professionally commissioned chatbot to demonstrate that the negative effect of chatbot anthropomorphism extends to influence company evaluation. 182 MTurkers participated in the 2 condition (Chatbot: control versus anthropomorphic) design. All participants read an anger-inducing scenario about searching for product information (scenario changed from study 2), chatted with a customer service chatbot (manipulated as in study 2), then evaluated the company on four bipolar items (Unfavorable:Favorable, Negative:Positive, Bad:Good, and Unprofessional:Professional; **α=.98**). An ANOVA demonstrated a significant negative effect of chatbot anthropomorphism on company evaluation ($F(1,180)=4.59$, $p=.03$).

Finally, Study 4 demonstrated the negative effect of chatbot anthropomorphism also influences consumers' purchase intentions and established evidence for expectancy violations as the underlying process. 171 MTurkers participated in the 2(Scenario: neutral versus anger) by 2(Chatbot: control versus anthropomorphic) design. Participants the anger condition read the scenario from study 3; those in the neutral condition read the same scenario without the anger-evoking details. The chatbot manipulations were the same as in study 2 except the anthropomorphized chatbot was depicted using a different gender- and expression-neutral avatar (confirmed via pretests). Participants stated their purchase intentions and answered questions about their perceived expectancy violation (discrepancy between chatbot's expected and actual performance). An ANOVA demonstrated a significant anthropomorphism by anger interaction on purchase intentions ($F(1,167)=4.29$, $p=.04$). Moderated mediation results (model 8 in PROCESS) demonstrated that in the anger condition, expectancy violations explained the negative effect of anthropomorphism on purchase intention (indirect effect = -.1839; 95% CI: [-.3912,-.0023]).

Companies make a deliberate decision of whether or not to anthropomorphize their customer service bots. Yet, four studies suggest that companies should try to gauge whether a consumer is angry before they enter the chat (e.g., through natural language processing), and only present an anthropomorphic bot if the consumer is not angry. Otherwise, they risk lower chat satisfaction ratings, company evaluations, and purchase intentions.

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How Would You Like to Pay for That?
The Effect of Payment Method on Consumer Behavior
Chair: Daniel Katz, University of Chicago, USA

Paper #1: Increasing the Pain of Payment Increases Affiliation and Rapport in Collaborative but not Competitive Relationships
> Avni Shah, University of Toronto, Canada
> James R. Bettman, Duke University, USA
> Tanya L. Chartrand, Duke Unviersity, USA
> Kathleen D. Vohs, University of Minnesota, USA

Paper #2: Not all Debt is Created Equal: On the Mental Accounting of Debt Forms
> Eesha Sharma, Dartmouth College, USA
> Stephanie Tully, Stanford University, USA
> Cynthia Cryder, University of Washington in St. Louis, USA

Paper #3: The Impact of Payment Plans on Feelings of Financial Constraint
> Christina Kan, Texas A&M University, USA
> Daniel Katz, University of Chicago, USA
> Abigail Sussman, University of Chicago, USA

Paper #4: Eliminating the Paper Trail: Consumers Use Less Trackable Payment Methods for Hard-to-Justify Purchases
> Christopher J. Bechler, Stanford University, USA
> Joshua I. Morris, Stanford University, USA
> Szu-chi Huang, Stanford University, USA

SESSION OVERVIEW

Consumers have many options when deciding how to pay for a given purchase. However, rather than making straightforward economic calculations around financing costs, consumers' perceptions and behaviors tend to vary across different forms of payment. A significant body of literature explores the effects of payment method on willingness to pay and pain of payment (e.g., Prelec and Loewenstein 1998, Gourville and Soman 1998, Prelec and Simester 2001), but leaves open questions about how payment method can affect other aspects of consumer behavior. In the current session, we aim to identify factors that influence choices across similar payment methods, and examine consequences for interpersonal interactions, as well as subsequent saving and repayment decisions.

Paper 1 (Shah, Bettman, Chartrand, Vohs, and Eisenkraft) investigates how payment method can affect social interactions. The authors show the level of closeness in an interpersonal interaction is affected by whether the person paying uses cash or card. They find when two people are in a desirable or collaborative setting, paying with cash increases interpersonal connection relative to paying with a card. However, the opposite pattern emerges when two people are in an undesirable or competitive setting.

Paper 2 (Sharma, Cryder, and Tully) explores how consumers' perceptions and behaviors regarding debt change depending on whether the debt is a line of credit or a loan. Debt that is framed as a line of credit (loan) is more likely to be mentally represented and money gained (owed). When framed as a line of credit, participants are more likely to take on debt and less worried about repayment. The findings also suggest that the difference may be explained by differences in how credit cards and loans are marketed.

Paper 3 (Kan, Katz, and Sussman) studies how making large purchases with different financing options can impact perceived financial constraint. The authors find that, relative to paying in a lump sum either at the time of purchase or after a six-month delay, pay-

ing in equal monthly installments leads to greater perceived financial constraint and to subsequent differences in saving and spending behavior. This pattern stands in contrast to an ex-ante preference among participants for the monthly payment method, believing it will result in the lowest perceived financial constraint.

Paper 4 (Bechler, Morris, and Huang) shows consumers' preferred payment method varies depending on the difficulty of justifying the purchase. Consumers are more likely to use cash than a card when making hard-to-justify purchases. This is due to the fact that cards leave a record of the transaction that may be revisited in the future.

Taken together, the four papers in this session address questions surrounding the impact of different payment methods on consumer perceptions and decisions (papers 1, 2, and 3) and which payment methods consumers prefer (papers 3 and 4). We anticipate this session will have broad appeal to scholars interested in financial decision-making, resource constraint, and improving consumer welfare.

Increasing the Pain of Payment Increases Affiliation and Rapport in Collaborative but not Competitive Relationships

EXTENDED ABSTRACT

If one could wish for two gifts that would substantially make life better, having money and forming close-knit relationships would be ideal candidates. Money and relationships, while being able to improve life outcomes, do so by dramatically different routes and mechanisms—and yet have significant overlap as well. For example, there are many instances where we use money as a means to form or strengthen our ties to one another. Yet, the mere concept of money has also been shown to change people's behavior for the worse, leading to behavior that is antisocial, selfish, and less thoughtful/mindful of others (Amato and Rogers 1997; Bhattacharjee, Dana, and Baron 2017; Vohs, Mead, & Goode 2006).

Recently we have seen large shifts in how consumers pay for transactions, with 'plastic' payments occurring more frequently than ever before (Foster, Schuh, and Zhang 2013). Psychologically, this is interesting because more proximal forms of payment (i.e., cash) create more *pain of payment*, in comparison to more distant forms of payment (i.e., debit cards, vouchers; Gourville and Soman 1998; Soman 2001). There is evidence that increasing the pain of paying at the time of purchase can influence how connected individuals feel towards the product/organization post-purchase (Shah et al. 2016). But can this spillover to our interpersonal relationships? Could the payment used in a social interaction—e.g., whether one treats another person using cash or 'plastic'—affect how connected and close individuals feel to one another?

We first tested these predictions using a hypothetical dinner scenario. Participants (N = 559) went through a visual scenario in which two individuals meet up after work and go out to dinner. In one photo, participants are shown a picture of the two individuals where they are seated across from one another at the table finishing up their appetizers. In order to manipulate payment form, half of the participants are told that one of the individuals pays for the bill entirely using cash (debit card) along with corresponding picture of a bill with cash (debit card) sticking out of it. Participants are then

asked to assess how close the two individuals in the scenario are sitting (based off of their memory of the one earlier photo), both implicitly by choosing the size of the table that they think is the appropriate length (shorter tables would be perceived as sitting closer) and explicitly via participants to report the physical distance of how close the two individuals were sitting. Participants also then answered questions about their perceived relationship. Paying by cash led participants to rate that two couple was sitting at a shorter table ($p < .01$), physically closer ($p < .001$), and more likely in a romantic relationship, saw each other more frequently, and knew each other longer (all $p < .03$) as compared to paying by cash. These results were mediated by the perceived pain of payment that participants believe that the spender experienced when paying for the bill whereby cash increased perceived pain of paying, subsequently increasing perceived closeness of the two individuals implicitly, explicitly, and relationally. These results replicated across four other studies varying the gender composition, restaurant, and meal.

Does increased pain of payment always lead to more closeness or can more pain decrease closeness in certain cases? In order to better understand the mechanism behind our effects, we ran a quasi-field experiment with dyads (N = 176), using a 2 (Relationship Frame: Collaborative or Competitive) x 2 (Payment: Cash or Voucher) x 2 (Spender or Recipient) between-subjects design using multiple measures of interpersonal connection and rapport. Participants arrived in groups of two. Half of the groups were told that they were in a *collaborative* task, competing with other teams to solve the most anagrams in ten minutes for a prize. The other half of groups were told that they would be taking part in a *competitive* task, competing with other individuals where the two individuals with the most solved winning a prize. Rewarding the highest two individuals controlled the amount of people who would win across conditions, also ensuring that participants could feasibly view the other person in the experiment with them as a potential resource just as in the collaborative frame. Participants were then told that before they took part in the anagram task, they would have a chance to get to know one another for 10 minutes at the student café. One person (the spender) was given $10 cash ($10 voucher), with the voucher being a less painful payment form, to spend between the two of them on a snack and/or drink of their choice (the dyad could not keep any extra money). Dyads returned and took part in the anagram contest. Experimenters video recorded the interaction during the anagram task measuring physical distance, eye contact, smiling, and whether the pair worked together/helped one another. After the ten-minute timer rang, individuals were instructed to fill out a questionnaire regarding their experience (including explicit affiliation measures of the other participant and a pain of payment question for the spender).

Consistent with predictions, in collaborative settings, spenders who paid with cash felt more affiliation toward their counterparts ($M_{cash} = 6.26$, $M_{voucher} = 5.32$, $p = .001$), but in competitive contexts, paying cash has a negative effect on the spender's feelings of affiliation ($M_{cash} = 4.73$, $M_{voucher} = 5.78$, $p < .001$). Cash increased collaboration and non-verbal affiliation in collaborative settings but decreased in competitive settings ($p < .02$). Being in a collaborative versus competitive context significantly moderates the relationship between payment form and affiliation ($F(1) = 26.8$, $p < .001$). Spenders who paid with cash reported significantly more pain than spenders who paid with voucher ($M_{cash} = 3.74$, $M_{voucher} = 2.02$, $p < .001$). Finally, as expected, there was a positive relationship between pain of payment and affiliation in collaborative contexts ($r(38) = .66$, $p < .001$) and a negative relationship between pain of payment and affiliation in competitive contexts ($r(38) = -.55$, $p < .001$).

Taken together, we find evidence that experiencing more pain of payment can increase post-transaction connection when individuals are in desirable or collaborative relationships, but can create greater interpersonal distance reducing post-transaction connection when individual are in undesirable or competitive relationships.

Not all Debt is Created Equal: On the Mental Accounting of Debt Forms

EXTENDED ABSTRACT

In March 2018, Americans' revolving debt reached over 1 trillion, most of which was credit card balances. At the individual level, 44% of Americans have credit card debt, with an average outstanding balance of $6,600 (Kopf 2019). Many of these consumers view their credit card borrowing as burdensome, with one out of eleven Americans who have credit card debt believing that they will never be free of that debt (Tsosie and El Issa 2018).

Giving the large amounts of consumer credit card debt, we investigated the mental accounting (Thaler 1999) of debt forms. In particular, we examined mental representations of debt in the form of credit (e.g., credit lines), and whether consumers mentally represent these forms differently from structurally similar options such as loans. Although both debt forms offer a liquidity component and a repayment component, we propose and demonstrate that these two forms vary in the extent to which consumers mentally represent them as "debt" (money owed). We show that credit is less likely to be represented as "money owed" as compared to loans. We use this conceptualization to better understand credit usage and repayment, and develop interventions that may mitigate costly financial decisions.

Study 1 was designed to examine consumers' mental representations of financing in the form of credit versus loans by investigating how they visually represent having access to those debt forms. Participants imagined having additional financing in the form of either a line of credit or a loan. Then, they viewed two visual depictions, with one representing an increase (money to be spent) and one representing a decrease (money owed) of $500. Participants were less likely to represent a line of credit (46.6%) as money owed as compared to a loan (69.2%), $\chi^2(1) = 31.92$, $p < .001$.

We propose that people mentally represent credit (vs. loans) more as additional money to be spent rather than repaid. If so, online searches for credit cards should be more likely to focus on access to funds and the ability to spend compared to searches for loans. Similarly, online searches for loans should be more likely to focus on the need to repay and repayment terms compared to searches for credit cards. In study 2, we used a Google trends comparison tool to test whether this pattern exists. We found the expected interaction, B = 67.71, SE = 1.69, $t(2009) = 39.96$, $p < .001$. While credit cards were searched more often than loans when accompanied by terms focused on access or spending, loans were searched more often than credit cards when accompanied by terms focused on repayment.

In study 3, participants wrote a story about someone who either had a revolving balance on their credit cards or an outstanding balance on a personal loan. Then, they thought about the main character in their story and identify which of eight avatars best represented that character. Four of the avatars were designed to depict characters who appeared to be wealthier (i.e., less indebted) and the remaining four were designed to depict characters who appeared to be poorer (i.e., more indebted). As predicted, participants in the credit condition were less likely to select a relatively poor (indebted) avatar as compared to participants in the loan condition, Wald $\chi^2(1)$, = 8.90, $p = .003$.

Study 4 was designed to examine consequences of consumers' mental representations of debt. Participants considered an offer for

an all-inclusive vacation, and an offer for either a one-time line of credit or a one-time loan that they could use for the vacation package. All else was held constant across conditions—the intended purchase, amount needed, revolving nature of the debt form, and the interest rate. As predicted, participants were more interested in using the financing offer in the line of credit condition as compared to the personal loan condition, $F(1, 403) = 4.97$, $p = .026$.

Study 5 examined whether these effects emerge when credit is more costly. Participants read about a financing offer for holiday purchases—either for a credit card with a higher interest rate or for a personal loan with a lower interest rate. Despite the credit card financing being more expensive, participants in the credit card (vs. personal loan) condition rated the offer as more attractive, $F(1, 399) = 5.76$, $p = .017$, and were less concerned about repaying the financing, $F(1, 399) = 4.63$, $p = .032$. Further, participants indicated that using financing in the form of a credit card would feel less like money owed as compared to using financing in the form of a personal loan, $F(1, 399) = 19.07$, $p < .001$, which explained the effect of debt form on both interest in using debt and concern over repaying it.

In study 6, we examined whether an intervention aimed at changing consumers' mental representation would decrease credit card spending. Specifically, we encouraged half of the participants to think of their own credit card as a "loan card." As expected, participants encouraged to think of their own credit card as a "loan card" were significantly less likely and interested in using their card to make an upcoming purchase, both $p < .001$. In addition, participants were more likely to view their credit card as money owed rather than gained, which explained the effect.

Finally, study 7 followed a 2 x 2 between-subjects design that varied debt form (credit vs. loan) and marketing framing (method of spending vs. method of financing). Specifically, participants viewed an offer for either a credit card or personal loan that varied in terms of whether the financial product was described as a form of debt. We found the expected interaction, $F(1, 801) = 4.88$, $p < .027$. Advertising language that described financial products as a form of debt decreased interest in using credit cards, $F(1, 801) = 7.35$, $p = .007$ and had no effect on using financing in the form of loans, $F < 1$.

The Impact of Payment Plans on Feelings of Financial Constraint

EXTENDED ABSTRACT

When purchasing expensive products, consumers are often presented with different financing options. This allows consumers to overcome potential liquidity constraints. We explore a potential consequence of financing choice; namely, influence on financial constraint. Prior research has shown that perceived financial constraint taxes cognitive capacity (Shah 2015; Mani et al. 2013) and is associated with high-interest borrowing (Shah, Mullainathan, and Shafir 2012). However, less research explores the antecedents of perceived financial constraint. We find that payment plans with equal monthly installments result in greater perceived financial constraint overall than paying the full cost in a lump sum, even when the full cost is postponed. Additionally, participants who pay in monthly installments allocate less money when given the opportunity. This pattern stands in contrast to beliefs that monthly financing will result in the lowest perceived financial constraint, and a corresponding preference among participants for the monthly payment method.

In the first study, participants read a hypothetical scenario in which they were planning to purchase a couch and loveseat set for $1,200. Participants were randomly assigned to one of three payment plans; pay the entire $1,200 at the time of purchase ("upfront"), pay $200 per month for six months ("monthly"), or pay the entire $1,200 six months after the purchase ("deferred"). After being assigned to condition, participants proceeded through 12 screens representing a calendar year. In each month, participants were asked how financially constrained they would feel and responded on a scale from 1 to 7 (1 = Not at all financially constrained, 7 = Very financially constrained). Participants were also told they have a retirement plan through their employer and they were asked how much they wanted to contribute to the retirement plan each month.

We analyze perceived financial constraint and retirement contributions during the six-month period from April to September, when the payments are different across conditions. A repeated measures ANOVA tested for differences in perceived financial constraint and retirement contributions. Post-hoc comparisons and planned contrasts revealed that those in the monthly condition felt significantly more constrained than those in the other two conditions ($M_{upfront}$ = 4.44, $M_{monthly}$ = 4.79, $M_{deferred}$ = 4.34; (Monthly) vs. (Upfront and Deferred), $p = .04$). Additionally, average monthly retirement contributions were significantly lower for those in the monthly condition ($M_{upfront}$ = $242, $M_{monthly}$ = $175, $M_{deferred}$ = $235; (Monthly) vs. (Upfront and Deferred), $p = .002$). Perceived financial constraint mediated the effect of monthly versus lump sum payments on average retirement contribution (b = 5.00, SE = 3.45, 90% CI = [.28, 11.34]), suggesting a causal relationship in which greater financial constraint leads to lower retirement contributions.

In a second study, we tried to replicate the results of Study 1 with a different focal monetary decision, this time in a spending context. Participants received the same information about the couch/loveseat set as in Study 1. Additionally, participants were told to imagine a beverage they like that costs $5. We then asked how many days in each month they would purchase the beverage.

We again ran a repeated measures ANOVA to test for differences in perceived financial constraint and beverage purchases. Perceived financial constraint for those in the monthly condition was significantly higher than those in the upfront condition ($M_{upfront}$ = 4.22, $M_{monthly}$ = 4.64, $M_{deferred}$ = 4.56; (Monthly) vs. (Upfront and Deferred), $p = .035$). Average monthly beverage purchases were significantly lower for those in the monthly condition ($M_{upfront}$ = 8.41, $M_{monthly}$ = 6.17, $M_{deferred}$ = 8.39; (Monthly) vs. (Upfront and Deferred), $p = .002$). Furthermore, differences in perceived financial constraint mediated the effect of monthly versus lump sum payments on beverage purchases (b = .60, SE = .29, 95% CI = [.06, 1.18]), again suggesting a causal relationship. In this case, higher financial constraint led to lower spending on a discretionary product.

Studies 1 and 2 suggest monthly payment plans cause greater perceived financial constraint than lump sum payments, and influence subsequent spending and savings decisions. A natural question to ask is whether consumers are aware of this ex ante. In Study 3, we described the same scenario regarding the couch/loveseat purchase and explained the three payment options. Then, we asked participants which payment option they would prefer and which would cause them to feel the least financially constrained. The order of the two questions was counterbalanced.

The results showed consumers' ex ante preferences and beliefs contrast with the findings regarding perceived financial constraint in our first two studies. Approximately half of all participants preferred the monthly payment plan and believed that option would cause them to feel the least financially constrained, compared to about 30% for the upfront plan and 15% for the deferred plan.

The results of this research have important implications for consumer welfare and companies that offer product financing. Initial results suggest that monthly payment plans may lead to greater per-

ceived financial constraint, relative to paying in a lump sum. This is a particularly important finding given that it stands in contrast to participants' beliefs that monthly payment plans should lead to the least financial constraint. Furthermore, our findings suggest that monthly payment plans may lead consumers to allocate less money to focal financial decisions, including both saving and spending decisions. This work contributes to existing literature exploring the impact of payment methods on pain of paying (Prelec and Loewenstein 1998; Soman 2001) by extending the investigation to perceptions of financial constraint and its consequences. We also contribute to research in scarcity (Shah et al. 2012), showing how constraint can alter the allocation of resources to subsequent savings and spending decisions.

Eliminating the Paper Trail: Consumers Use Less Trackable Payment Methods for Hard-to-Justify Purchases

EXTENDED ABSTRACT

Imagine you are buying heroin. Your technologically savvy dealer who has a Square card reader offers you the opportunity to pay with cash or debit/credit card. Because this is an illegal transaction and you do not want a record of the purchase that others (e.g., the government) may subsequently see, you likely opt to pay with cash.

This scenario is probably difficult to imagine for a typical ACR attendee. However, most if not all consumers have at one point faced this type of decision—choosing between different payment methods when making a purchase. These purchases elicit various perceptions and feelings. For example, purchases such as a cheap souvenir on vacation or an overpriced bottle of water at the airport, while not illegal, do not make consumers feel particularly proud. Because these purchases are hard-to-justify, they can induce negative feelings such as guilt, shame, regret, or embarrassment. Unlike the purchase of heroin, where there is a need to prevent others from subsequently seeing a record of the transaction, these everyday purchases may induce a psychological need for the consumer to avoid recalling these transactions in the future. Because purchases with cards leave a paper trail, consumers may opt to use cash rather than cards for these hard-to-justify purchases—not to hide these purchases from others, but to hide them from themselves.

Our theorizing connects classic justification literature (Inman and Zeelenberg 2002; Simonson 1989) with past research on intertemporal choice, which demonstrates that consumers have a strong aversion to future pain and loss (Loewenstein and Thaler 1989; Prelec and Loewenstein 1998). Consumers are increasingly becoming aware of their financial footprint through the constant tracking of their assets, purchases, and bills, and know that they will revisit the transactions they make via trackable payment methods again in the future. Because consumers have a strong aversion to revisiting financial activities that could induce negative feelings, they prefer less trackable payment methods (cash vs. a card) for hard-to-justify purchases to reduce the likelihood that they will revisit these transactions.

Notably, we expect that this effect emerges even though financial statements may not always display the exact names of the items that consumers purchased because consumers generally can recall (or infer) their specific past purchases when seeing the stores' names on their statements. This was confirmed via a pilot (202 MTurkers) where participants remembered the items they purchased in 88.49% of their card transactions when viewing the transaction descriptions.

Across five studies we found consistent support for our hypothesis that consumers prefer using cash for less justifiable purchases to avoid recalling these purchases. In Study 1, we tested for this relationship using field data from a university bookstore. We categorized 122,940 in-store item purchases from April 1 – May 13, 2017 into 58 purchase subcategories via web scraping, and then had 902 MTurkers rate the justifiability of purchasing items in each subcategory. Controlling for relevant variables (e.g., price, discounts), we found that the harder it was to justify purchasing an item of a given subcategory, the more likely customers were to use cash (vs. card) for the purchase, $p < .001$.

Four lab studies followed up on this result and illustrated convergent validity. In Study 2, 103 university students viewed 10 items sold at the bookstore. Half of the items were hard-to-justify (e.g., foam stadium hand) and half were easy-to-justify (e.g., notebook). Participants were informed that each item cost $5 and indicated whether they would purchase each item with cash or debit card. Participants were more likely to use cash than card for hard-to-justify purchases, $p = .005$. Pretests measuring the justifiability of the items in this study and subsequent studies verified that our manipulations were successful (p's $< .001$).

In Study 3, 200 MTurkers viewed five pairs of purchases (ranging $5 - $30) that were equivalent in price and purchase location but varied on justifiability (e.g., easy-to-justify: $15 on ibuprofen at a convenience store; hard-to-justify: $15 on candy at a convenience store). Participants were more likely to pay with cash for hard-to-justify purchases than easy-to-justify purchases, $p < .001$.

Study 4 used a similar design as Study 3 and illustrated a mechanism-based boundary condition of this effect. 200 online participants reported how often they tracked the purchases they made on their cards, and viewed eight pairs of purchases that varied in justifiability. Again, participants were more likely to use cash for hard-to-justify than easy-to-justify purchases, $p = .003$. Additionally, there was a significant interaction between justification and frequency of tracking, $p = .002$. For frequent trackers of their card usage (1 SD above the mean) who were more likely to be reminded of a purchase paid by a debit card in the future, the effect of purchase justifiability on payment method was amplified, $p < .001$. However, there was no effect of purchase justifiability on payment method for infrequent trackers (1 SD below the mean), $p = .846$.

Study 5 (1,432 MTurkers) directly manipulated the trackability of the card for the purchase and purchase justifiability (between-subjects). Participants first chose to purchase one of two $10 items from a convenience store (hard-to-justify choice set: large bags of regular vs. peanut M&Ms; easy-to-justify choice set: Advil vs. Bayer pain reliever tablets). Then participants indicated a payment method for the purchase (trackable card condition: $20 bill or a Visa Debit Card; untrackable card condition: $20 bill or a Prepaid Visa Debit Card). Participants in the trackable card condition were informed that the card was connected to their main bank account (like regular debit cards) and they would see a record of this purchase on their bank statement. Those in the untrackable card condition were informed the prepaid card was not connected to their main bank account (like regular prepaid cards in the marketplace) and they would not see a record of this purchase on their bank statement. As expected, we found a significant justification by trackability interaction, $p = .034$: Participants were more likely to use cash for the hard-to-justify purchase when the debit card was trackable, $p = .017$, but were not more likely to use cash for the hard-to-justify purchase when the debit card was untrackable, $p = .535$.

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Wising Up About Goal Progress:
The Antecedents and Consequences of Goal Progress Perceptions

Chairs: Marissa Sharif, University of Pennsylvania, USA
Kaitlin Woolley, Cornell University, USA

Paper #1: The Categorization Bias: The Effect of Categorization on Goal Progress Perceptions and Motivation

Marissa Sharif, University of Pennsylvania, USA
Kaitlin Woolley, Cornell University, USA

Paper #2: The Difficulty of Task Initiation Affects Consumers' Perceived Goal Progress

Hoori Rafieian, Drexel University, USA
Marissa Sharif, University of Pennsylvania, USA

Paper #3: Moderating the Progress Bias: The Role of Goal Orientation

Margaret C. Campbell, University of Colorado, USA
Justin Pomerance, University of Colorado, USA
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Paper #4: Looking Back on a Journey to Derive Growth: Using Conceptual Metaphor to Shape Perceptions of an Attained Goal

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SESSION OVERVIEW

Perceived progress in attaining a goal is a key factor in determining consumers' subsequent motivation. Gym-goers are more determined to complete their remaining workouts when they feel closer to their goal (Heath, Larrick, and Wu 1999) and coffee drinkers are more likely to complete a coffee loyalty card when they feel closer to receiving a free beverage (Kivetz, Urmisky, and Zheng 2006). This work has found that how much progress consumers *perceive* they have made towards their goal, rather than the actual amount of progress they have made, is a stronger predictor of their subsequent motivation. Yet a remaining question is what predicts these progress perceptions in the first place? This session joins together four papers that address this question, offering new insights into the antecedents of goal progress perceptions and identifying important consequences for consumer motivation.

The first two papers examine two different biases that consumers are susceptible to when forming goal progress perceptions. **Sharif and Woolley** explore how categorization can bias goal progress perceptions and resulting motivation. Specifically, in five studies, they find that consumers that perceive their completed and remaining actions to be in distinct categories anchor their estimates of progress on the proportion of categories completed versus remaining, rather than on the absolute amount of progress made, leading them to underestimate their progress at high absolute progress and overestimate their progress at low absolute progress. **Rafieian and Sharif** examine how the difficulty of initiating a goal biases goal progress perceptions. In five studies, they demonstrate that people perceive they have made more progress on their goals when they complete a goal-relevant task that was difficult to initiate than a goal-relevant task that was relatively easier to initiate.

The second two papers examine how mindset influences goal progress perceptions. **Campbell, Pomerance, and Warren** demonstrate how goal orientation influences the "progress bias," the tendency to believe that goal-consistent behaviors have a greater impact on goal progress as compared to goal-inconsistent behaviors. In six studies, they find that consumers who are higher in promotion fo-cus are more susceptible to the "progress bias." Lastly, **Huang and Aaker** examine how shifting people to focus on the journey of their goal achievement vs. the destination of their goal achievement influences goal progress perceptions and resulting motivation. In six studies, they reveal that focusing on the goal as a journey leads to a greater likelihood of people continuing behaviors aligned with the attained goal.

In determining whether or not to persist at their goals, consumers often assess how much progress they have made. As demonstrated by this set of papers, these progress perceptions can be influenced by a wide variety of factors, ranging from cognitive biases to consumer mindset. These papers offer insights that can help consumers be smarter about how they monitor their goal progress. As this session integrates research from a wide range of disciplines, such as cognitive psychology and consumer motivation, we expect that this session will attract researchers of various backgrounds, leading to a rich discussion.

The Categorization Bias: The Effect of Categorization on Goal Progress Perceptions and Motivation

EXTENDED ABSTRACT

Categorization has been shown to influence judgments in a wide range of domains (Allen and Wilder 1979; Maddox et al. 2008; LeClerc et al. 2005). However, prior research has yet to explore how categorization influences perceptions of goals progress, an important factor in influencing motivation. Building off of research on unit bias, which demonstrates that people focus more on the unit amount than on the absolute magnitude (Geier, Rozin, and Doros 2006), we propose perceiving completed and remaining goal-relevant activities to be in distinct categories biases goal progress perceptions, such that consumers anchor their goal progress perceptions on the proportion of categories completed, rather than the absolute progress they have made. Because consumers who categorize completed and remaining actions into distinct categories anchor their estimate of progress on the proportion of completed and remaining *categories* (closer to 50%), they will perceive they made more progress on their goal under low absolute goal progress, but perceive they made less progress on their goal under high absolute goal progress, compared to consumers who do not categorize their actions. Five studies test this prediction.

Study 1 examined how categorization interacts with absolute progress in informing consumers' progress perceptions in a 2 (Absolute Progress: High vs. Low) × 2 (Categorization: Present vs. Absent) between-subjects design. 801 participants imagined having the same 7 exercises to complete. In the Low-Progress condition, participants imagined completing two workouts, with five workouts remaining. In the High-Progress condition, participants imagined completing five workouts, with two workouts remaining. We manipulated categorization through a similarity manipulation. In the Categorization condition, the exercises were labeled according to the body part they worked out (either upper body or ab workout). In the No-Categorization condition, these exercises were labeled as "workouts." Afterwards, we measured participants' goal progress perceptions. Regression analyses revealed the predicted Progress (High vs. Low) × Categorization (Present vs. Absent) interaction on progress

perceptions (B = 21.37, p < .001). Participants in the Low Progress condition reported greater perceptions of net goal progress in the Categorization (vs. No-Categorization) condition (B = -8.69, p = .016). On the other hand, participants in the High Progress condition reported lower perceptions of net goal progress in the Categorization (vs. No-Categorization) condition (B = 12.68, p < .001).

Study 2 replicated this interaction using a different categorization cue in a 2 (Absolute Progress: High vs. Low) × 2 (Categorization: label vs. no label) between subjects design. 600 participants learned they had 7 workouts to complete. These were described as Set 1 of exercises and Set 2 of exercises in the Categorization condition and were not grouped under a label in the No-Categorization condition. We replicated the predicted Progress × Categorization interaction (B = 56.45, p < .001), such that at Low Absolute Progress, participants reported greater progress perceptions in the Categorization (vs. No-Categorization) condition (B = -20.73, p < .001), which reversed at High Absolute Progress (B = 35.73, p < .001).

Study 3, examined our proposed process by examining the effect of categorization at a medium level of progress. 1203 participants were randomly assigned to condition in a 3 (Progress: High vs. Medium vs. Low) × 2 (Categorization: Present vs. Absent) between-subjects design. Participants in the Categorization condition learned they had 14 exercises to complete that comprised two sets of workouts. Participants in the No-Categorization condition learned they had 14 exercises to complete (no set label). We manipulated progress (Low Progress: 30% of workout completed; Medium Progress: 50% of workout completed; High Progress: 70% of workout completed).

We theorize that participants anchor their progress perceptions closer to 50% in the categorization condition because they feel they have completed one out of two categories of workouts. Thus, if participants' absolute progress is actually 50% (as in the Medium-Progress condition), the effect of categorization on progress perceptions should attenuate relative to the low and high conditions. As predicted, we found a significant High Progress × Categorization interaction (B = -.57, p = .001) and a Low Progress × Categorization interaction (B = .56, p = .002), such that the difference in progress perceptions between the Categorization and No-Categorization conditions was *greater* for High (vs. Medium) progress, and the difference in progress perceptions between the Categorization and No-Categorization conditions was *greater* for Low (vs. Medium) progress. Thus, at medium goal progress, categorization (vs. no categorization) had less of an effect on goal progress perceptions relative to High Progress or Low Progress.

Our last two studies examined consequential outcomes of progress perceptions for motivation. Study 4 used similarity as a cue for categorization. 1600 participants completed a series of mental exercises that were not categorized (all math or all verbal exercises) or categorized (some math and some verbal). We manipulated absolute progress by giving participants a choice to continue or quit the mental exercise task after completing three (Low Progress) or eight (High Progress) exercises out of eleven. We replicated the Progress × Categorization interaction on progress perceptions (B = 7.68, p =.032). Further, we demonstrate these progress perceptions influence motivation in an incentive-compatible task: we find a Progress × Categorization interaction predicting participants' decision to complete the remaining exercises (B = .58, p = .012), such that under Low Progress, Categorization *increased* the likelihood of completing the remaining exercises relative to No-Categorization, and under High Progress, categorization *decreased* the likelihood of completing the remaining exercises. Study 5 replicated these interaction effects on both progress perceptions (B = -5.98, p = .041) and motivation (B = 8.56, p =.002) in another incentive-compatible study in which par-

ticipants completed a series of actual exercises that also manipulated categorization via similarity.

Overall, five studies demonstrate the effect of categorization between completed and remaining tasks on goal progress perceptions and the downstream consequences for motivation. We suggest consumers who perceive their completed and remaining tasks to be in distinct categories anchor their estimate of goal progress on the number of categories completed, rather than absolute progress made. Further, we demonstrate that these goal progress perceptions reliably influence consumers' motivation in incentive compatible tasks.

The Difficulty of Task Initiation Affects Consumers' Perceived Goal Progress

EXTENDED ABSTRACT

Consumer's perceived progress towards a goal is an assessment of where the consumer stands relative to a desired end state (Huang and Zhang 2011) and can affect subsequent motivation to pursue the goal (Fishbach and Dhar 2005). However, perceptions of goal progress are not always accurate of consumers' absolute goal progress (e.g., Campbell and Warren 2014). In this research, we explore one factor that biases goal progress perceptions. We demonstrate that consumers perceive they have made more progress towards their goal after completing a goal-relevant task that was difficult to initiate vs. easier to initiate, holding the actual effort in the goal-relevant task constant. We suggest that people misattribute the effort they put into initiating the task to be effort they have put towards the goal itself, leading them to feel like they have made more progress towards their goals than they actually have.

We test these predictions in five pre-registered studies. In Study 1, 403 participants from Amazon Mechanical Turk were randomly assigned to one of two conditions: effort and no-effort condition. All participants were asked to imagine having the goal of becoming fit. Participants in the effort condition were asked to imagine that on a workout day, the bus did not arrive on time, so they decided to wait for the next bus that arrived 40 minutes later (taking 50 minutes total to get to the gym). Participants in the no-effort condition read that the bus arrived on time and their trip to the gym took 10 minutes. All participants then read that they completed all the exercises they had planned to, taking 60 minutes total. Participants were asked how much progress they had made towards becoming more fit from completing the workout. As predicted, participants in the effort condition perceived to have made more progress than those in the no-effort condition (t (1,401) = -2.191, p = .029).

In Study 2 (N = 400), we sought to see if our findings were replicable in situations when a task was perceived to be difficult to initiate due to internal factors, rather than external factors. Participants imagined they had a goal of becoming more fit. Participants in the effort condition read that they went to the gym despite feeling sluggish, slow, and not in the right mood. Participants in the no-effort condition simply read that they went to the gym and completed their workout. As expected, perceived progress was significantly higher in the effort condition than in the no-effort condition (t (1,398) = -2.645, p = .008). This effect was mediated by perceived effort required to initiate the workout (indirect effect = 2.86; 95% CI: .863 to 5.312)[1].

In Study 3, we examined our predictions in a paradigm involving real behavior. Four hundred MTurk participants were asked to type 20 CAPTCHAs and complete a workout task, consisting of four workouts, which would be then rewarded with a monetary bonus. However, the tasks were framed differently depending on condi-

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1   Similar mediating results were found in the rest of the studies

tion. Participants in the effort condition were told that the main task was a workout task. However, they would only be eligible to do the workout task if they first typed twenty CAPTCHAs. Participants in the no-effort condition were told that they would be completing two tasks: a CAPTCHA task and a workout task. Thus, in the effort condition, participants should perceive the workout task is more difficult to initiate than in the no effort condition. As predicted, perceived progress was significantly higher in the effort condition than in the no-effort condition (t (1,398) = -2.89, p = .004).

In Study 4 (N = 806), we aimed to replicate our effects in an additional real behavior study when the task was difficult to initiate for internal reasons. In the effort condition, participants were asked to recall and write about two times when they wanted to exercise, but they felt sluggish or lacked motivation. Those in the no-effort condition wrote about times they shopped for clothes. Participants were then given the choice to either complete four exercise activities and receive a monetary bonus or leave the study. Participants who opted in (N = 735; 92% of participants) then rated their perceived progress towards becoming more fit due to completing the workouts. Those in the effort condition rated their progress as significantly higher than those in the no-effort condition (t (1,733) = -2.68, p = .007).

We propose that people misattribute the effort they put into initiating the task as effort they are putting towards the goal-relevant task itself, biasing their goal progress perceptions upwards. In Study 5, we aimed to test this prediction by examining if we could moderate our effect by making it salient to participants that they are misattributing the effort in initiating the task. MTurk participants (N = 1200) were randomly assigned to a condition in a 2 (salient vs. not-salient) x 2 (effort vs. no-effort) design. This study followed the same design as Study 1, except participants were asked two questions: "how much effort did it take to get to the gym?" and "how much effort would you put into completing the workout session?" before answering the progress perception question in the Salient condition or after answering this question in the Not-Salient condition. As predicted, in the Salient condition, there was no significant difference between the effort vs. no-effort conditions (t (1,602) = -.666, p =.51). However, in the Not-Salient condition, replicating our previous studies, participants in the effort condition felt like they have made more progress than those in the no-effort condition (t (1,599) = -2.02, p = .043).

We find consistent evidence of a bias that people are susceptible to when assessing their goal progress. Consumers perceive they have made more progress towards their goals when they complete a goal-relevant that that was difficult to initiate vs. easy to initiate, holding the effort of the task constant, because they misattribute the effort in initiating the task to be effort towards the task itself.

Moderating the Progress Bias: The Role of Goal Orientation

EXTENDED ABSTRACT

Why do consumers often fail to reach their goals? One reason is because they fail to accurately monitor their behavior and regulate their actions when they are not making sufficient progress (Baumeister and Heatherton 1996; Locke and Latham 1990). Accurately monitoring progress is difficult, and consumers tend to think that behaviors that move them toward their goals (e.g., saving $40 or foregoing dessert) have a larger impact than behaviors that move them away from their goals (e.g., spending $40 or eating dessert), a pattern termed the progress bias (Campbell and Warren 2015).

The present research examines whether motivational differences influence the extent to which consumers show a progress bias. The progress bias occurs because consumers generally believe they will reach their goals, and they seek out evidence consistent with this belief (Campbell and Warren 2015). Regulatory focus theory posits that a promotion focus (pursuing goals by trying to attain success as opposed to trying to avoid failure) leads people to focus predominately on the presence or absence of positive outcomes (Aaker and Lee 2001; Crowe and Higgins 1997; Higgins 1997). Based on this, we propose that a stronger promotion focus will exacerbate the progress bias in goal pursuit. Because perceptions of progress inform the manner in which consumers pursue goals (i.e. whether or not they alter their strategies in goal pursuit), we additionally argue that promotion focus can discourage consumers from means-shifting (i.e., changing their behavior), even when they are not making sufficient goal progress.

Studies 1 and 2 investigated whether promotion focus moderates the progress bias. In study 1, participants evaluated the impact of saving $40 or spending $40 on a money-related goal. Participants rated the impact of the saving/spending on a 9-point scale, and finally completed an 18-item measure of regulatory focus (Lockwood, Jordan, and Kunda 2002). As predicted, a significant interaction between the saving/spending manipulation and the promotion focus measure indicated that the progress bias (the difference in rated impact between saving and spending) was larger for participants with a stronger promotion focus (β = .40, $t(402)$ = 2.64, p = .009, partial η^2 = .0170). In study 2 we manipulated promotion focus by asking participants to complete word stems designed to prime promotion focus (e.g. gro_th = growth; Wan, Hong, and Sternthal 2009). Participants then imagined either spending or saving $40, similar to study 1. Participants in the promotion focus condition showed a larger progress bias than participants in the prevention focus condition ($F(1, 266)$ = 5.18, p = .024, partial η^2 = .019).

Study 3 tested whether consumers with a higher promotion focus would be less likely to change their means of goal pursuit because they showed a larger progress bias, even if they were not on pace to reach their goals. We gave participants an incentivized goal to accrue a certain number of points by playing blackjack online. Participants played five rounds of blackjack; the outcome of each round was pre-determined so we could control objective progress. Critically, the outcomes of the second and fifth rounds were equal in magnitude but opposite in goal-consistency (a 73 point win and a loss 73 point loss), allowing us to assess the progress bias within-subjects as the difference in rated impact between the two rounds. After five rounds, participants chose whether to continue playing blackjack or switch to another means of goal pursuit (another game). We again measured promotion focus. As hypothesized, we found a positive effect of promotion focus on progress bias ($\beta_{promotion}$ = .16, $t(397)$ = 2.04, p = .042, partial η^2 = .010), a negative effect of progress bias on the likelihood of means-shifting ($\beta_{progress\ bias}$ = -.11, z = -2.64, p = .008), and a significant indirect effect (estimate = -.017, SE = .011, 95% BCCI = [-.0463, -.0018]).

In study 4 we tested a potential debiasing intervention using an investment game. Before starting the investment game, half of the participants received a de-biasing intervention, instructing them to pay special attention to any negative events. All participants then selected a mutual fund in which to invest, with an incentive-compatible goal of growing their money to a certain threshold. They observed the performance of their investment over a sequence of quarters in which its value increased or decreased. After several quarters, participants decided whether to invest in a different fund or to stick with their initial choice. In order to create an environment that encouraged switching, we controlled returns such that participants were not on pace to reach their goal. As predicted, the debiasing intervention significantly reduced the size of the progress bias ($\beta_{debiasing}$ = -.42, t =

2.36, $p = .019$), and did so marginally more for participants higher in promotion focus ($\beta_{interaction} = -.28$, $t = 1.77$, $p = .077$). Additionally, participants with a higher progress bias were less likely to switch to a different mutual fund ($\beta_{progress\ bias} = -.25$, $z = 3.98$, $p < .001$). Moderated mediation analysis showed that at one standard deviation below the mean of promotion focus, there was no indirect effect of the debiasing manipulation on participants decision to change mutual funds (95% BCCI = [-.089, .167]). However, at one standard deviation above the mean of promotion focus, the debiasing manipulation increased participants odds of changing to a different mutual fund (95% BCCI = [.047, .374]).

Our research offers a deeper understanding of when and why consumers fail to accurately monitor their goal progress. Promotion focus leads to a greater progress bias by directing consumers' attention towards goal-consistent information and away from goal-inconsistent information. This has important implications for whether or not consumers alter their strategies when making insufficient progress in goal pursuit.

Looking Back on a Journey to Derive Growth: Using Conceptual Metaphor to Shape Perceptions of an Attained Goal

EXTENDED ABSTRACT

People pursue goals throughout their lives. Students attend study groups to excel in school, and dieters monitor portion sizes to lose weight. While some of these pursuits may end with failure, many end with success—the goal is attained.

How do people perceive goal progress that has successfully reached 100%? And how do they behave afterwards? Reaching 100% on a goal allows individuals to disengage from behaviors directed at achieving this specific goal (Ferguson & Bargh, 2004; Förster, Liberman, & Higgins, 2005). This postattainment disengagement is functional, allowing people to focus on other goals deemed important (Gollwitzer, 1999). However, disengagement can also be detrimental, since goal-congruent behaviors are often beneficial in and of themselves. Consider, for instance, those who achieved a weight-loss goal but begin eating poorly again, or students who completed their education but stop acquiring knowledge.

We focus on goals that can benefit from continuous engagement, such as fitness and learning goals, and explore the use of conceptual metaphor—a powerful, immersive cognitive tool that shapes people's perception of an experience without changing the experience itself (Keefer et al., 2011; Lakoff & Johnson, 1980). We show that perceiving an achieved goal as a journey that one has just completed (compared to an alternative metaphor of having reached a destination, or no metaphor at all) encourages continuous goal-aligned behaviors. We further demonstrate that this positive effect occurs because perceiving an attained goal as a completed journey heightens the feeling that one has indeed grown from the previous goal-unattained state into the present goal-attained state, increasing people's intrinsic motivation to continue these goal-aligned behaviors (Ryan & Deci, 2000; Dweck & Leggett, 1988; Paunesku et al., 2015).

Study 1 tested the effect of journey metaphor in shaping students' perception of their attained academic goals. We asked 210 college students who had recently attained an academic goal to describe their experience and the actions they took to complete this goal. We then randomly assigned them to either a journey metaphor, a destination metaphor, or a no-metaphor control condition: "Please take a moment to think about this goal you just successfully attained. Please think about how this experience of attaining this goal is like completing a journey [reaching a destination]." Participants did this thought exercise while looking at a visual that depicted their goal attainment as a completed journey [a reached destination], with the word "journey [destination]" highlighted on the path [the end point of the path] accordingly. Participants in the control condition did not do any metaphor practice. Students reported on three 7-point scales how likely they were to continue each of the three goal-aligned behaviors they reported earlier. Two weeks later, we sent out a follow-up survey to capture how much these students had put into each of the three goal-aligned behaviors in the past two weeks.

We found that when participants were guided to perceive the attained academic goal as a completed journey, they were more likely to continue goal-aligned behaviors (M = 5.86, SD = 1.18) than those using a destination metaphor (M = 5.38, SD = 1.16) and those in the control condition (M = 5.49, SD = 1.43, $t(207) = 2.28$, $p = .024$; the latter two conditions were not significantly different. The results after two weeks were consistent with the behavioral tendency reported at time 1. We also replicated this pattern in Study 2, in which 200 adults who had attained a fitness goal chose between 1-month unlimited access to an in-home fitness program or to a comedic relief program. When participants were guided to perceive their 100%-attained fitness goal as a completed journey, they were more likely to choose the fitness program that would help maintain their fitness level than those using a destination metaphor and those in the control condition, $t(211) = 3.96$, $p < .001$; the latter two conditions were not significantly different.

Study 3 launched a seven-day food diary program and manipulated the metaphor practice that dieters went through after reaching 100% on their dieting goal (journey, destination, and no-metaphor control). Further, we measured dieters' perception of personal growth from their completed goal. When dieters perceived the attained dieting goal as a completed journey, they were more likely to continue goal-aligned behaviors than were those using a destination metaphor and those in the control condition, $t(262) = 2.93$, $p = .004$. Importantly, this positive effect of journey metaphor occurred by increasing dieters' feelings that they had indeed grown into the present goal-attained state; mediational pathway through growth = .1412 (95% CI = .0599 to .2235).

Study 4 further verified the driving role of the perception of growth among college students who were about to initiate a three-part financial learning program versus those who just completed this program. We found that for students who had just completed the financial learning program, perceiving this achieved goal as a completed journey helped them look back to derive a sense of growth, which led them to spend more time learning about investing; mediational pathway through growth = 41.20 (95% CI = 28.2039 to 57.2856). In contrast, for students who had not yet started this learning program, the journey (vs. destination) metaphor motivated learning by helping them derive greater continuity to their ideal future identity, replicating the findings documented in Landau et al. (2014).

Study 5 employed a 10-day walking program and captured exercisers' actual behavior of continuing tracking their walking for another three days after the completion of the program. This study underscored the importance of perceiving a goal as "100% complete" in inducing the positive effect of journey metaphor. Lastly, Study 6 tested our hypotheses among executives who graduated from an executive education program in Africa. Three on-site interviewees executed a 30-minute individually-guided thought practice (journey vs. destination metaphor) during the graduation ceremony; a cohort was excluded from this practice to serve as a control group. Executives who described their achieved business-learning goal as a journey were more likely to continue goal-congruent behaviors even six months after graduation.

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There is More to Promotions Than Increased Sales: Novel Consumer Responses to In-Store Promotions

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Paper #1: When is HILO Low? Price Image Formation Based on Frequency versus Depth Pricing Strategies

Daniel Sheehan, University of Kentucky, USA
Ryan Hamilton, Emory University, USA
Ramnath K. Chellappa, Emory University, USA

Paper #2: Christmas Promotions in September – What Happened to Halloween? The Effect of Prospective Event Markers on Attitudes Towards Promotions

Chaumanix Dutton, University of Southern California, USA
Kristin Diehl, University of Southern California, USA

Paper #3: Waiting and Watching: The Effects of Observing Others' Point-of-Payment Prosocial Decisions

Jillian Hmurovic, University of Pittsburgh, USA
Cait Lamberton, University of Pittsburgh, USA

Paper #4: Can Featuring Social Media Photographs of In-Store Retail Events Cause FOMO?

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Barbara E. Kahn, University of Pennsylvania, USA

SESSION OVERVIEW

In-store promotions are frequently encountered marketing tactics. Yet much of the research on in-store promotions has been managerially in nature, examining the effects on manufacturers (e.g., brand substitutions) and retailers (e.g., spill over sales to other categories). In contrast, this session focuses squarely on the consumer and asks: beyond purchase, how do consumers respond to different types of in-store promotions? Specifically, the papers examine how consumers respond to different pricing strategies (paper 1), promotional displays (paper 2), pro-social appeals at check-out (paper 3), and in-store promotional events (paper 4). Further, the papers explore diverse responses to promotions such as store price image (paper 1), attitude towards the timing of the promotion (paper 2), as well as donations (paper 3), FOMO (fear of missing out) and willingness to recommend the brand (paper 4). Jointly these papers highlight novel and interesting consumer responses to a variety of in-store promotional activities.

Sheehan, Hamilton, *and* **Chellappa** examine consumer responses to everyday low price (EDLP) and high-low (HILO) promotion strategies. Prior investigations exposed respondents to prices simultaneously across stores and found lower price perceptions for EDLP promotions. In contrast, these authors exposed consumers to prices sequentially (by store), which may better reflect how consumers encounter promotions in real life. In contrast to previous work, they find lower price perceptions for HILO stores, an effect that strengthens when discounting familiar brands.

Dutton *and* **Diehl** demonstrate that in-store thematic promotional displays trigger the generation of prospective event markers (i.e., thinking of things that may occur between encountering the promotion and the promoted event). Timewise, consumers anchor on the event being promoted for event-related markers, but for event-unrelated markers they anchor on the day they encounter the promotion. This temporal anchor affects attitudes towards early promotions, which are more positive for later (vs. earlier) anchors.

Hmurovic *and* **Lamberton** examine how consumers respond to retailer-initiated charitable appeals at check-out. They focus specifically on how observing another's prosocial decision affects consumers responding to the same appeal. Their results show that the speed of an observed donation can chill consumer generosity: observing a very fast donation refusal is inferred as being an easier decision, consequently reducing how much consumers give.

Rifkin, Chan, *and* **Kahn** examine how consumers react to in-store experiential promotions that they did not attend, but learn about later (e.g., through social media photos). They find that similar to social events they missed, missing out on in-store events can also trigger FOMO. Further, for those less connected to the brand, highlighting promotional events they missed increased willingness to recommend the brand.

Reflecting the conference theme of expanding wisdom, this session sheds new light on in-store promotions by examining a range of novel consumer reactions to a variety of in-store promotions. All papers are at an advanced stage with multiple studies completed. We expect this session to generate significant interest among researchers studying decision making in retail environments, but also those interested in pricing, timing and event markers, brand experiences, and pro-social behavior.

When is HILO Low? Price Image Formation Based on Frequency versus Depth Pricing Strategies

EXTENDED ABSTRACT

When managing prices, retailers must concern themselves with how their prices affect customers' individual purchase decisions, but also with how those prices in aggregate affect the retailer's price image: its overall reputation for pricing. One factor that affects price image is the distribution of a store's low prices relative to other retailers. Specifically, whether a store has a small price advantage on many items—a frequency strategy—or a large price advantage on just a few items—a depth strategy—affects how consumers feel about its prices overall, relative to its competitors.

An important finding from research on this topic is that consumers tend to form lower price images of retailers with small, frequent relative price advantages than they do of retailers with large, infrequent price advantages. Even when two retailers have the same total price for a basket of goods, or the same average price for an item over time, consumers tend to assume that stores with frequent, shallow price advantages have lower prices overall. Alba et al. (1999) dubbed this the "frequency advantage," and it has proven to be a notably robust finding (Alba et al. 1994; Alba et al. 1999; Danziger, Hadar, and Morwitz 2014; Lalwani and Monroe 2005).

One limitation of this previous research is that all of it has been conducted in experimental settings where participants were given the prices of frequency and depth stores simultaneously. For example, in several experiments by Alba and colleagues (1994), participants were presented with a list of 60 grocery items, with the prices of each item at two different stores listed side-by-side. Similarly, in studies by Danziger, Hadar, and Morwitz (2014), participants were shown 100 weeks of pricing data for the same product (package of Portobello mushrooms) at two stores, with prices for both stores shown side-by-side, one week at a time.

While it is not hard to think of settings where consumers might directly compare prices across stores (e.g., comparing weekly circulars, using price comparison apps or websites), the current research is predicated on the assumption that direct comparison across stores is not the only way that consumers encounter a store's prices. We argue that the context in which prices are encountered—simultaneously across stores vs. separately, one store at a time—has important implications for how consumers translate frequency and depth pricing strategies into a retailer price image. In particular, we suggest that the frequency advantage typically identified by previous research (Alba et al. 1994; Alba et al. 1999; Danziger, Hadar, and Morwitz 2014; Lalwani and Monroe 2005) may be less likely to occur when consumers encounter prices separately, store-by-store, rather than simultaneously across stores.

Historically, the influence of frequency and depth pricing strategies on price image has been investigated in two ways: by showing experimental participants a basket of prices at a single point in time (e.g., Alba et al. 1994) or intertemporally, by showing participants the prices of an item or items as they change over time (e.g., Alba et al. 1999). We wanted to test our proposed theory in both paradigms. Therefore, our first two experiments used a very similar design, but replicating across both the basket of prices approach (Experiment 1A), and the intertemporal approach (Experiment 1B). Experiments 1A and 1B used within-subjects designs, in which participants were exposed to the prices of both stores, one at a time, before making their evaluations.

In Experiment 1A, participants were shown the prices of a list of 40 items at two stores (4 brands in each of 10 categories). One store had small price advantages on 33 of the items (frequency store) and the other had larger price advantages on the remaining 7 of the items (depth store). The total price of all 40 items at both stores was the same. In Experiment 1B, participants saw the weekly prices of 5 brands available in one category (peanut butter) across 16 weeks, 8 weeks at each store (alternating each week). In the frequency store, 4 of the 5 peanut butter brands were $.20 lower each than the depth store, but one of the 5 brands was $.80 cheaper at depth store. Thus, each week, the total price across the peanut butter category was the same at both stores, and the same from week to week. The results were consistent across the two experiments: in contrast to the frequency effect previously identified, when participants were shown the prices first at one store and then the other, they consistently thought the prices were lower at the depth store than at the frequency store.

Experiment 2 replicated the results of Experiment 1A using a between-subjects design, in which participants viewed the prices at only one store (frequency or depth) before making their evaluations. While extending to a between-subjects design may seem like a trivial innovation over previous work, in fact, previous theories cannot account for price image formation when consumers are exposed to the prices at just one store, rather than being able to explicitly compare across stores.

Experiment 3 examined a theoretically-derived moderator of the effect. Specifically, we have argued that the relative price image advantage enjoyed by depth-stores depends on how easy it is to assess the value of those price advantages. That is, when familiar brands are discounted against other familiar brands in a category, it will be easier for consumers to evaluate the discount. If this account is accurate, then we should expect that the effect will be reduced when consumers are evaluating the prices of unfamiliar brands as they will have no way to evaluate whether a price is attractive or unattractive. Experiment 3 tested this moderator by examining the effect of depth vs. frequency pricing on price image in the context of both familiar and unfamiliar brands. Experiment 4 examined the effect in a more externally valid setting, as participants were asked

to shop for products in a store mock-up, one that used real products, store shelving, and price tags. In this context, the central effect was again replicated: when the store used depth pricing, the result was a lower price image than when the store used frequency pricing.

Christmas Promotions in September – What Happened to Halloween? The Effect of Prospective Event Markers on Attitudes Towards Promotions

EXTENDED ABSTRACT

In 2017, Target announced that all promotions would have a Thanksgiving theme during November, responding to requests not to "go right into Christmas" (Associated Press 2017). The early appearance of holiday-themed promotions has been lamented as "holiday creep" in popular culture, however it is unclear whether these attitudes are held widely and if so, what causes these attitudes.

We argue that promotions tied to future events spontaneously cause people to think about events and actions that *may* occur between encountering the promotion and the promoted event (prospective event markers). Prior literature focused predominantly on how the number of retrospective event markers, i.e., events that *did* occur *after* an event, affects time perception (Zauberman et al. 2010, Ahn, Liu and Soman 2009). Prior work on prospective event markers is sparse and has focused on unrelated event markers' effect on time perception (May 2017).

What remains unknown is whether consumers spontaneously generate prospective event markers and whether these markers affect attitudes towards the *timeliness* of the promotion, an important and overlooked consumer response. We propose that spontaneously generated prospective event markers carry a temporal dimension which affects attitudes toward the promotion. We expect event markers to be temporally anchored on either the promoted event (*related* markers) or the day encountering the promotion (*unrelated*). Subsequently, consumers anchored further in the future may be more accepting of an "early" promotion, than those anchored more in the here and now. We test these predictions in four studies.

Study 1 provides initial evidence that consumers spontaneously generate prospective event markers when encountering thematic promotions and that the type of event marker (related vs. unrelated) can affect attitudes towards the promotion. M-Turk participants (N=305) saw a picture of a Valentine's Day display and imagined going to the store that day (21 days before Valentine's Day). Participants first listed anything that came to mind when seeing this display and then indicated their attitudes towards the timing of the promotion on a scale from "too early" (1) to "too late" (7), with the midpoint (4) labeled as "at the right time". They then reported their relationship status and classified each listed thought as related or unrelated to Valentine's Day.

Most participants (96%) spontaneously listed a related marker and almost half (47%) listed an unrelated marker. On average, people generated more related (*M*=4.52) than unrelated (*M*=1.27) event markers (*F*(1,304)=223.75, *p*<.001). Given this imbalance, we regressed attitude towards the promotion on whether a related marker was listed (no = -1, yes = 1), an unrelated marker was listed (no = -1, yes = 1), and controlled for relationship status (no = -1, yes = 1). Being in a relationship (*b*=.13, *F*(1,301)=4.22, *p*=.041) and listing a related marker were associated with more positive attitudes (*b*=.33, *F*(1,301)=4.48, *p*=.04), however, unrelated thoughts did not have a significant effect (*F*<1). In order to add greater balance and to rule out any reverse causality we manipulated type of event markers in subsequent studies.

In study 2, M-Turk participants (N=339) were randomly assigned to a 2(Marker number: One/Four) x 2(Marker type: Unre-

lated/Related) between subjects design. Participants saw a picture of a July 4th promotion and imagined going to the store that day (27 days before July 4th). They listed either one or four events that were either related or unrelated to July 4th. They reported their attitude towards the promotion and indicated *when* each events would occur and whether they planned to celebrate July 4th or not, which we controlled for in all analyses.

For comparability, we use the distance of the first listed event marker from the study date to examine marker timing. Plans to celebrate July 4th did not affect the marker timing marker (F<.01). As predicted, the date of related event markers was closer to July 4th (M=19.26 days), while unrelated event markers (M=13.60 days) were anchored closer to the promotion date ($F(1,334)$=45.90 , p<.001). Unexpectedly, the first marker listed in the one marker condition (M=17.34) was anchored closer to the holiday than in the four marker condition (M=14.77, $F(1,334)$=6.75, p=.01). The interaction was also significant ($F(1,334)$=7.85, p<.01), indicating that the difference between related and unrelated markers was larger in the four ($F(1,334)$=41.33, p<.001), compared to the one marker condition ($F(1,334)$=8.82, p<.01).

Unsurprisingly, those who planned to celebrate July 4th had more favorable attitudes (b=.19, $F(1,334)$=11.53, p<.01). Importantly, participants who were assigned to list related markers had a more favorable attitude towards promotion timing (M=3.86) than those who listed unrelated markers (M=3.62, $F(1,334)$=5.50, p=.02). Neither the number of markers listed (F<1.70), nor the interaction (F<1) were significant. Also, as predicted, the timing of the marker mediated the relationship between marker type and attitude for the one marker (-.0218, CI_{95}[-.0620,-.0005]) and marginally for the four marker condition (-.0525, CI_{90}[-.1105, -.0052]). In a separate study we replicate these findings including the mediation in a non-holiday promotion context.

Study 3 further explored the focal effect across two additional holidays. M-Turk participants (N=422), with plans to celebrate both Halloween and Thanksgiving, were randomly assigned to a 2(Type: Unrelated/Related) x 2(Holiday Replicate: Halloween, 33 days in advance/Thanksgiving, 55 days in advance) between subjects design. Since type of holiday did not interact with the manipulation, we collapsed across holidays in all analyses. Procedures followed those of the study 2.

Replicating study 2, the first unrelated event marker listed occurred closer to the date of the promotion than the first related event marker ($M_{unrelated}$=23.49, $M_{related}$=30.52, ($F(1,420)$=17.14, p<.001). There was no direct effect of the type of marker on the attitude towards the promotion ($F(1,420)$=1.70, p=.19), however, timing of the marker significantly mediated the relationship between the type of marker mentioned and the attitude towards the timeliness of the promotion (-.1015, CI_{95}[-.1588, -.0529]).

This research is the first to examine the relationship between promotions, prospective event markers, and attitudes towards the timing of a promotion. We find that related and unrelated event markers are anchored on different points in time, which affects attitudes towards a promotion. Research in progress further examines the effect of relevance of the holiday being promoted.

Waiting and Watching: The Effects of Observing Others' Point-of-Payment Prosocial Decisions

EXTENDED ABSTRACT

Imagine watching the grocery shopper ahead of you complete their transaction. A request appears on the shopper's payment screen ("Would you like to make a donation to the local food pantry?") and while you wait, you see them respond "Yes" or "No." When you reach the checkout, the same charitable appeal appears. Does your prosocial response depend on whether the previous shopper donated? Does it matter how quickly they made their donation decision?

We propose that the answer to the first question should likely be "it depends." When we observe another consumer's choice, their selection becomes a "social default" that we subsequently imitate (Huh, Vosgerau, and Morewedge 2014). However, observing behavior deemed inappropriate or undesirable (as is selfish behavior; i.e., Berkowitz 1972) does not produce consumer mimicry (McFerran et al. 2010). Further, negative ("hating") behaviors prompt weaker inferences than do positive ("loving") consumer behaviors (Gershoff, Mukherjee, and Mukopadhyay 2007) and are, therefore, less diagnostic. Consequently, we predict that consumers who observe others refuse to donate will feel little need to mimic this choice – the observed "No" will not necessarily determine whether they donate or not.

However, in such cases the speed of the observed decision may still shape consumers' donation amounts. Consumers make critical inferences based on decision speed (e.g., Critcher, Inbar, and Pizarro 2013; Kupor et al. 2014; Srivastava and Oza 2006), perceiving the speed as particularly diagnostic at temporal extremes (e.g., very quick = less difficult; very slow = greater accuracy; Van de Calseyde, Keren, and Zeelenberg 2014). Based on this, we predict that merely observing the person in line ahead of us choose not to donate won't persuade us to take the non-normative step of turning down an in-store charitable appeal; however, to the extent that their very fast or very slow decision speed suggests confidence, observing their refusal may nevertheless chill our generosity. Analytically, we thus predict that when a consumer observes another consumer refuse a prosocial appeal, we will see a nonlinear influence of observed decision time on the observer's subsequent donation amount.

In study 1, participants (n= 306 MTurkers; 44.12% male) imagined observing another shopper at a self-checkout station respond to a payment touch-screen donation request. Participants read that they were able to observe the prior shopper's decision (Yes/No; randomly assigned) and that they had to wait for this decision to be made (between 1 second and 10 minutes:59 seconds; randomly selected). Afterwards, participants indicated their own donation decision upon reaching the checkout (Yes/No), with donors reporting their donation amount. Controlling for income, we see that although the quadratic interaction (speed^2 x outcome) did not impact donation likelihood (t= 1.14, p= .255), it did impact donation amounts among those who donated (t= 2.13, p= .036). Consistent with our theory, observing fast (between 1 and 65 seconds; p's ranging from .054 to .099, respectively) donation refusals (t= -2.24, p=.027), but not acceptances (t= .39, p= .697), reduced size of donors' donations. It appears that this negative effect on donation amount also appears in the case of very slow refusals (>666 seconds, p< .10; >942 seconds, p< .05), but these speeds lay outside the study's manipulated range.

In study 2, we examine whether decision ease inferences account for the nonlinear influence of decision duration using a consequential paradigm that mirrors the common retail check-out context. Lab participants (n= 132 students; 50.77% male) learned that one person (per session) would receive $10. Each participant considered donating a portion of their earnings to a local animal charity. Before responding to the donation request, participants waited a randomly-determined amount of time (between 3 seconds and 3 minutes) while another person purportedly made their donation decision (Yes/No; randomly assigned; displayed on-screen). Participants then responded to the charitable appeal, with donors indicating donation amount. Participants reported inferences regarding the other person's deci-

sion ease (2-item index; 1—SD, 7—SA; α= .86), charity familiarity (1—Not at All Familiar, 7—Very Familiar), charity perceptions (3-item index; 1—SD, 7—SA; α= .93), and an attention check (excluded those who failed prior to analysis; n= 2). Controlling for charity familiarity and charity perceptions, we observe a significant quadratic interaction on the perceived ease of the other's donation decision (t= -2.60, p= .011). Observed fast (<60 seconds, p< .050) donation refusals (t= 3.79, p= .0003), but not acceptances (t= .86, p= .391), were inferred to be significantly easier decisions. Again, a similar effect appeared to emerge for very slow decisions (>221 seconds, p< .10; >284 seconds, p< .05), however, these speeds were outside the scope of our manipulation. Tests of mediated moderation (PROCESS, model 8; 10,000 bootstrapped samples) were significant for donation size (.0001, CI_{95}[.00002, .0004]) but not likelihood (-.0004, CI_{95}[-.0002, .00006]), as in study 1 – the effect of fast donations on donation amount was carried through inferences of decision ease (-.0002, CI_{95}[-.0004, -.00002]).

Study 3 uses study 1's setting to test whether consumers anticipate their response to observing the outcome and speed of another's donation decision. After observing the donation decision of another shopper, participants (n= 198 students, 51.01% male) estimated the impact on their donation amount (sliding scale; -50 = "decrease my donation a lot," 50 = "increase my donation a lot") and likelihood (sliding scale; 1 = "much less likely to donate," 100 = "much more likely to donate"). In contrast to study 1's findings, the quadratic interaction did not predict donation amount (t= .06, p= .954) but did predict donation likelihood (t= 1.99, p= .048). Participants anticipated that observing a fast donation decision (t= 1.90, p= .059), but not refusal (t= -0.98, p= .327), would increase the likelihood that they'd give.

Cumulatively, observing another consumer's fast donation refusal reduces how much the observer gives in response to the same appeal (although consumers fail to anticipate this impact). This suggests that the success of retail point-of-payment charitable appeals may be shaped by the degree to which individuals can observe one another's behavior, and chiefly, that our ability to watch while we wait may dampen our generosity more than we expect.

Can Featuring Social Media Photographs of In-Store Retail Events Cause FOMO?

EXTENDED ABSTRACT

As consumers increasingly embrace Amazon's convenient online shopping, competing retailers are looking for ways to use their physical stores as a strategic advantage. For example, many retailers are creating in-store events to attract customers and create brand community. Commonly, photographs from these events are featured on retailers' social media sites, creating content that lives on after the event and promotes word-of-mouth (Hartmann et al., 2008; Katona et al., 2011, Lee et al., 2014; Toubia & Stephen, 2013).

While these activities benefit customers who participate, what about customers who do not attend? Will posting photos elicit FOMO (Fear of Missing Out) and potentially harm brand loyalty?

Based on research on FOMO (Rifkin et. al, 2018), we hypothesize that consumers will feel more FOMO if social media photos feature social interactions vs. traditional marketing materials. Secondly, we hypothesize that the degree of FOMO felt will depend on whether viewers identify with individuals in the photos. Finally, we hypothesize that feelings of FOMO, and subsequently brand attitudes, will be moderated by how anxious or distant consumers feel about their ability to continue membership in the brand community.

Before testing these hypotheses in the retailing environment, we ran lab experiments with simulated missed events. Prior research has established that brand relationships are similar to social relationships (Aaker et. al. 2004), and since our participants are students, we focus on missed social-group events at school as a surrogate for retailing events involving a brand community. Further, because previous research has suggested that FOMO has negative implications on well-being (Alt, 2015; Baker et al., 2016; Oberst et al., 2017, Rifkin et. al 2018), we begin by validating these intuitions.

In Study 1 (n=191), participants imagined that they had chosen to attend a concert and therefore missed a local barbeque with a friend scheduled at the same time. There were three conditions. In the "no photos" and "own group photos" conditions, members of the participant's social group attended the barbeque; in the "other group photos" condition, the friend's family members attended the barbecue. In both "photos" conditions, participants imagined checking social media while at the concert and seeing photos of the missed barbecue.

As predicted, seeing photos from a missed event that included one's own friends evoked FOMO, which in turn reduced enjoyment at the concert. Specifically, compared to the no photos condition, viewing missed-event photos involving one's own social group significantly reduced current-event enjoyment (M = -.59, p = .009). However, viewing missed-event photos involving another social group (the friend's family, M = -.33) had no impact on current-event enjoyment, relative to the no photos condition (M = -.21, p = .406). Further these results were mediated by FOMO, such that missed-event photos of one's own group generated the greatest FOMO, which consequently reduced enjoyment.

In Study 2 (n=240), we tested the moderating effect of an individual's anxious attachment style, which refers to the confidence one has in the relationship bond (Fraley & Shaver 2000). Using a similar procedure to Study 1 (without the "other group photo" condition), participants were randomly assigned to a "photos" or "no photos" condition, and an anxious attachment scale was collected (Wei et al. 2007). We replicated the main effect: viewing (vs. not viewing) missed-event photos significantly undermined current enjoyment (M_{view_photos} = -.62 vs. M_{no_photos} = .01), and this was qualified by the predicted viewed photos × anxious attachment interaction (b = -.23, p = .001). Viewing the missed-event photos reduced ongoing experience enjoyment for those higher in anxious attachment, but not among those with lower levels of anxious attachment.

Finding support for the basic hypotheses, we conducted a field study (n=278) with a Lululemon pop-up store on campus. In phase one, we emailed participants a survey about their connection to Lululemon and invited them to an in-store yoga event the following week. Our interest was in the students who did not attend the event. In phase two (after the event), participants navigated to the local Lululemon's social media page and were randomly assigned to view either photos of event attendees or of Lululemon merchandise. Then, they completed a survey that included our primary DV, NPS (the Net Promoter scale).

We predicted that the social photo condition would evoke more FOMO. Further, we predicted those with a *high* connection to the brand would react to the FOMO generated by the social event photos as they would be more likely to attend the event and be like those featured in the photos (following results from Study 1). We then predicted they would compensate for these negative feelings by reinvesting in the brand (i.e., report higher NPS).

We found mixed support for our hypotheses. FOMO in the social-photos condition (M=2.61) was higher than in the merchandise-photos condition (M=2.31), but the difference was not significant

(p=.13). There was a significant photo type × self-brand connection (to Lululemon) interaction on NPS (p=.03); however, the results were opposite from predicted. Viewing social photos increased NPS (vs. merchandise photos) among those *less* connected to the brand. For those *more* connected to the brand, merchandise photos increased NPS (vs. social photos).

Speaking with the Store Manager, we identified a potential reason post hoc for the findings. The Store Manager believed (but did not have hard data) that highly connected consumers did not typically attend store events; the events were primarily attended by *less* connected members of their brand community (contrary to our a priori beliefs). Thus, our actual results are consistent with the manager's intuition: FOMO-inducing social photos made those who may have identified with the photographed event attendees (here the *less*-connected members of the Lululemon community) more likely to recommend Lululemon in the future (higher NPS). Similar to Study 2, people less connected to Lululemon, like our anxiously-attached lab participants, were more susceptible to feelings of FOMO. While in Study 2, we observed reductions in well-being, in this field study, participants seem to have compensated for these feelings of disconnection through positive WOM, consistent with prior work (Packard & Wooten, 2013).

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Biases in Consumer Money Management

Chair: Byung Cheol Lee, Columbia University, USA

Paper #1: The Role of Attention in Opportunity Cost Neglect
Stephanie Smith, Ohio State University, USA
Stephen A Spiller, University of California Los Angeles, USA
Ian Krajbich, Ohio State University, USA

Paper #2: When $5 is Not $5: Search Strategies and Relative Thinking about Money
Byung Cheol Lee, Columbia University, USA
Crystal Reeck, Temple University, USA
Eric J Johnson, Columbia University, USA

Paper #3: Source, Form, and Form of the Source: A Malleable Monopoly Money Phenomena
Priya Raghubir, New York University, USA
Shelle Santana, Harvard Business School, USA

Paper #4: Beliefs about Future Wealth Impact Financial Decisions
Jennifer Trueblood, Vanderbilt University, USA
Abigail Sussman, University of Chicago, USA

SESSION OVERVIEW

How can the field of consumer behavior help consumers better manage their monetary resources? This session brings together four papers that examine biases in consumer money management that have significant implications on spending and investment decisions. While some prior consumer research has demonstrated that consumers do not always perceive and use money in line with standard economic assumptions (e.g., Gourville 1998; Raghubir and Srivastava 2002), the cognitive elements and drivers of these biases remain underexplored. In line with the conference theme of "*Becoming Wise*," this session contributes to the understanding of financial wisdom by examining documented biases in the consumer financial decision making literature and expands financial wisdom by clarifying the cognitive processes underlying these biases.

The first two papers revisit two well-documented biases in money management - opportunity cost neglect and the magnitude effect - and broaden our understanding on these biases with process tracing data. **Smith, Spiller, & Krajbich** sets the stage by revisiting opportunity cost neglect. Using eye-tracking data, they show that visual attention to opportunity cost reminders might underlie the consumer tendency to neglect opportunity cost in purchase decisions. **Lee, Reeck, & Johnson** examines how comparative search processes, such as a tendency to consider relative differences in price, contributes to the magnitude effect in intertemporal choice. Using mouse-tracking data, they show that a search strategy that facilitates monetary attribute comparisons is linked to relative thinking and to the subsequent inconsistency in valuation of objectively same price gap across numeric magnitudes of price. The last two papers report new biases in money management. **Raghubir & Santana** uncover a novel factor that leads to inconsistencies in valuation of the same monetary stimuli: the subjective value of the form of the source of money transfers to its new form. Accordingly, for example, gift cards are spent differently as a function of whether they are purchased using cash, credit cards, airline miles or loyalty points. **Trueblood & Sussman** uncover a novel motivational bias that influences investment decisions. They show that people generally have a positive outlook on the future and that these optimistic views can serve as reference points, increasing preferences for riskier savings accounts.

Taken together, the present findings complement and advance our understanding of biases in consumer money management behaviors. This topic will benefit from a lively discussion on implications of biases on consumer welfare as well as on the interventions that will debias consumers and help them use monetary resources to their best interest. The primary audience for this session will be basic and applied researchers interested in resource management, financial decision making, and process tracing methods.

The Role of Attention in Opportunity Cost Neglect

EXTENDED ABSTRACT

Choices necessitate opportunity costs: choosing one option means foregoing another. Despite this self-evident economic fact, consumers often neglect their opportunity costs (Frederick et al. 2009; Legrenzi, Girotto, & Johnson-Laird 1993; Jones et al. 1998). As a result, simply reminding consumers that opportunity costs exist (i.e., that they could use their time or money for another purpose) can change consumer choices, typically by reducing the likelihood of spending resources. Making opportunity costs more accessible in memory or increasing resource constraints can increase the likelihood that consumers consider them (Spiller 2011). That is, there is a change in the considered (and subsequently, accumulated) support in favor of not purchasing.

A potential mechanism for this shift in evidence is visual attention. Past research has demonstrated a causal role of visual attention in choices (Armel et al., 2008; Gwinn et al., 2019; Mormann et al., 2012; Pärnamets et al, 2015). Specifically, attention amplifies incoming evidence about the currently-fixated option (Smith & Krajbich, 2019). Therefore, based on this previous research, we hypothesize that the differences in purchase rates are driven by (1) a larger amount of attention given to the explicit opportunity cost and/or (2) a larger impact of attention to the explicit opportunity cost, either way resulting in lower purchase rates.

In this preregistered study, we endowed participants (N = 50) with $4 at the beginning of the study and informed them that one of their choices would be implemented at the end. First, subjects stated how much they would be willing to pay for each of 144 food items. Then, they made 200 incentivized purchase choices (separated in two blocks of 100 trials each) about these food items. Specifically, on each trial, subjects saw a picture of one food item on the screen. After 1 second, the food disappeared and two options appeared on the screen: a "buy" option and a "do not buy" option. Crucially, we manipulated the framing of the "do not buy" option. For one block of trials, the options were labeled "Buy Food for $X" and "Do Not Buy Food for $X" (the implicit opportunity cost condition). For the other block of trials the options were labeled "Buy Food for $X" and "Keep $X" (the explicit opportunity cost condition). The order of the blocks was counterbalanced across subjects. Each price was randomized to take a value between $0.50 below a subject's WTP for that item and $0.50 above a subject's WTP for that item.

Importantly, the two "do not buy" options lead to identical outcomes: the subject chooses not to buy the food at the given price. However, the results suggest that subjects do not treat them as identical options. Consistent with prior research, there was a significant difference in the proportion of trials on which participants chose to buy (b = -0.078, se = 0.019, t(49) = -4.06, p < .001), signifying that the proportion of trials on which participants purchased was about 8

percentage points lower when opportunity costs were explicit rather than implicit. To investigate a potential mechanism for this finding, we examined the eye-tracking data. For these analyses, we constructed a single index for each of our measures for each individual. In particular, we averaged each individual's choices and (log-transformed) dwell time durations across trials within block, resulting in one measure of choice and one measure of attention for each person in each block. We then subtracted the mean of the implicit trials from the mean of the explicit trials.

The effect of explicit opportunity costs on purchases was reflected in attention, that is, the difference in logged dwell times to the Buy vs. Not Buy option (b = -0.038, se = 0.015, t(49) = -2.47, p = .017), indicating that making opportunity costs explicit increased attention to the "do not buy" option relative to the "buy" option. There was a significant indirect effect of condition on purchase through relative attention (b = -0.034, 95% CI based on 5,000 bootstrapped samples: [0.067, -0.007]) indicating that the shift in attention partially accounted for the effect on purchase. A significant direct effect remained (b = -0.045, se = 0.015, t(48) = -3.05, p = .004), indicating that the shift in attention did not fully account for the shift in purchase rates.

We also examined repeated measures analyses of participants' choices. Here, we accounted for dependent observations by bootstrap-sampling subjects rather than individual observations and we also controlled for the relative value (WTP – Price) of each trial as a strong covariate of choice. Additionally, we allow for the indirect effect through relative attention to differ with opportunity cost salience (that is, we allow for the coefficient on relative attention to interact with condition).

Consistent with the between-subjects analysis, we find a similar within-subject indirect effect through relative attention. More importantly, we observe a significant moderated indirect effect (b = -0.003, 95% CI based on 5,000 bootstrapped samples: [-0.007, -0.0002], indicating that the negative indirect effect due to relative attention was stronger in the explicit condition than the implicit condition. Not only do consumers pay more attention to the "keep" option than the "do not buy" option (relative to the "buy" options), but the attention that they do pay is weighted more heavily in the explicit condition than the implicit condition.

Overall, we provide substantial evidence for the role of attention in opportunity cost considerations. In particular, we demonstrate that purchase choices and attention are strongly linked. Subjects devote more relative dwell time to "keep" than they do to "do not buy" — despite the fact that these two options have identical outcomes. In addition to spending more time on the explicit option, the marginal impact of their attention is also greater when they are looking at "keep" compared to "do not buy." Together, these two factors (amount and impact of attention) help to explain the difference in purchase rates observed between situations with implicit vs. explicit opportunity costs. This work has important implications for decision framing, especially in situations where opportunity costs might be visible and/or attention-grabbing.

When $5 is Not $5: Search Strategies and Relative Thinking about Money

EXTENDED ABSTRACT

What predicts consumer choices of a $500 television that is more energy-efficient, providing 30 months of usage for a fixed electrical cost, over a $300 television that is less energy-efficient, providing 20 months of usage? Consumer often make choices that involve a trade-off between purchase price (e.g., upfront cost) and operating

benefits (e.g., long-term benefits in saving operating costs). In this research, we examine the role of the numeric magnitude of product prices and how information search strategies influence magnitude effects on choice. Research in time preference has shown that people make more patient choices with larger dollar amounts than with smaller ones. For example, Thaler (1981) reported that subjects who were indifferent between receiving $15 immediately and $60 in a year, were also indifferent between $3000 now and $4000 in a year. Generally, the impact of money amount differences on choice tend to be attenuated with larger money magnitudes than smaller magnitudes. For example, consumers are willing to work harder to save $5 on a $15 calculator, but not on a $125 calculator (Tversky & Kahneman 1981).

A potential moderator of this effect in real-world consumer choices is search strategy—how and in what order people acquire information, not just the amount of information. Indeed, previous research (Reeck, Wall, & Johnson 2017) demonstrated that a type of search strategy that facilitates the comparison of attributes across the two alternatives is correlated with greater susceptibility to contextual influences on intertemporal choice. Based on the past research, the present research pursues two aims. First, it examines whether consumers are more likely to choose the more expensive, yet greater operating-benefits option as numeric magnitude of prices increases, controlling for the absolute difference in price ("magnitude effect"). Second, it examines whether those who search in a manner that facilitates the comparison of money amounts ("money-comparative search") are more susceptible to the magnitude effect. The comparative searching tendency might enhance the identification of the money amount magnitude on which the decision is being made, which would lead to greater susceptibility to magnitude effects.

In Study 1 (N = 223), participants completed a hypothetical product choice task in which they selected between the more expensive, greater operating-benefits option (e.g., $500 television that provides 30 months of usage for a fixed electrical cost) and the less expensive, smaller operating-benefits option (e.g., $300 television that provides 20 months of usage). They made choices on Mouse-LabWeb, which provides similar process tracing metrics to eye-tracking. They completed such trials for three products (battery, space heater, and television) and for three levels of absolute price gap between the two options.

Importantly, within each level of absolute price gap, each trial featured the same (jittered) values for operating benefits, so the only difference induced by the manipulation was whether a certain price gap (e.g., $14) was presented with small price magnitudes ($30.8 vs. $44.8), medium magnitudes ($61.6 vs. $75.6), or large magnitudes ($92.4 vs. $106.4). However, consumers chose as if they treated the price gap differently depending on the magnitude it was presented. A generalized linear mixed-effects model with participant random effects showed a main effect of price magnitude ($p < .001$). Specifically, the predicted choice proportion of the more expensive, yet greater operating-benefits option was 91% with large magnitudes, 85% with medium magnitudes, followed by 65% with small magnitudes.

To examine the type of search strategy that is more susceptible to this contextual influence, we analyzed the mouse-movements data. Money-Comparative-Search Index was computed as a continuous measure of tendency to compare price between options by acquiring price information across alternatives, as opposed to other types of information acquisitions (i.e., acquisition within each alternative or acquisition of operating benefits information across alternatives). Money-Comparative-Search Index was entered as a regressor along with an indicator for magnitude in a model of choice. Critically, there was a significant interaction between Money-Comparative-Search

Index and magnitude (*p* = .039). Subsequent analyses revealed a substantial magnitude effect for participants who exhibited high (+1 SD) price-comparative searching (Small = 56%; Medium = 77%; Large = 86%), while the magnitude effect was much less pronounced for those who exhibited low (-1 SD) price-comparative searching (Small = 73%; Medium = 91%; Large = 95%).

Study 2 (N = 267) explored whether the moderating role of search strategy in magnitude effect extends beyond the context in which consumers decide on spending money (money as a loss) to a context in which consumers decide on gaining money (money as a gains). Participants completed an incentive-compatible intertemporal choice task in which they selected between a smaller amount of money delivered sooner and a larger amount of money delivered later. Trials were equally likely to feature small, medium, or large amounts of money for the larger, later option. A continuous measure of comparative search tendency (comparing attributes between options by acquiring information across alternatives) was entered as a regressor along with an indicator for magnitude in a model of patient choice. This analysis revealed a main effect of magnitude on patient choice (*p* < .001), as participants were more likely to select the larger, later option for medium ($\beta = 0.07$, s.e. = 0.01) or large ($\beta = 0.10$, s.e. = 0.01) magnitude trials compared to small magnitude trials. Critically, there was a marginally significant interaction between comparative search tendency and magnitude (*p* = .073): a substantial magnitude effect was found for participants who exhibited more comparative searching, while the magnitude effect was much less pronounced for those who exhibited less comparative searching.

Overall, these two studies reveal that people who tend to compare attributes across alternatives are more susceptible to the magnitude effect. This moderating role of search strategy is confirmed in consumer product choices and intertemporal choices. This work advances our theoretical understanding of information search behavior by suggesting that the tendency to consider relative differences is linked to comparative search. This work also has important implications for choice architecture by implying that information environments that facilitate attribute comparisons across alternatives would make consumers fall prey of the contextual influences more.

Source, Form, and Form of the Source: A Malleable Monopoly Money Phenomena

EXTENDED ABSTRACT

This paper bridges the literatures on the effects of the "form of money" and the "source of money" on subjective valuations of money. Seven studies show that the subjective value of money is a function of not only its current form, but also a function of its prior form. Said differently, the form of money has a second-order effect and percolates through to other forms it is converted into. Accordingly, gift cards are spent differently as a function of whether they are purchased using cash, credit cards, airline miles or loyalty points (a second order monopoly money effect, Studies 1, 3 and 4; Raghubir and Srivastava 2008), smaller or larger denominations (a second order denomination effect, Study 2; Raghubir and Srivastava 2009). Even legal tender ($100) is valued differently with higher spending and purchase intentions when it is converted from a foreign currency (a second order face value effect, Studies 5a, 5b and 5c; Raghubir and Srivastava 2002).

Study 1, a field study (n=184 from a University paid pool), endowed participants $5 to spend or keep in one of four forms: cash, gift card (GC), points convertible to cash, and points convertible to a GC that could be converted to cash. Participants spent $2.02 on average after exchanging a 500-point gift certificate for a $5 gift card (the

"malleable monopoly money" condition) versus $1.18 when they exchanged a 500-point certificate for $5 in cash (*F*(1, 88)=4.23, *p*<.05, η^2=.046), a difference of 71.19%. The average spend in the two control conditions was no different ($5 cash=$1.69; $5 gift card=$1.65), and was directionally lower than the amount spent in the malleable monopoly money condition.

Study 2 (usable n=122) shows that a $100 gift card purchased using five $20s versus $100 bill is associated with approximately 12% higher spending levels (Ms=$67.90 vs. $60.40 respectively, *F*(1, 116)=3.23, *p*=.075, η^2=.027). This suggests that the denomination effect can carry over to a second-order effect.

Study 3 (n=100 mTurkers) were asked to rate "second order" money forms: gift card purchased with cash, gift card purchased with reward points, and credit card cash back, along with their components: plastic or email gift cards, cash, or reward points, on a 0=Not at all/ 100=the same as "money" scale. Gift cards purchased with cash (*M*=65.15) were perceived to be significantly more like money than gift cards purchased with reward points (*M*=57.64, *t*=3.44, *p*<.05), or email gift cards (*M*=58.81, *t*=3.29, *p*<.05), and marginally more so than a plastic gift card (*M*=61.97, *t*=1.68, *p*<.10; *F*(3, 285)=5.50, *p*=.001, η^2=.055). In turn, gift cards purchased with reward points were judged to be significantly more like money than reward points (*Ms*=57.64 vs. 46.43, *t*=5.16, *p*<.05) but significantly less like money than credit cash back (*M*=69.48, *t*=4.18, *p*<.05; *F*(2, 198)=39.61, *p*<.001, η^2=.286).

A regression with the subjective value of a *gift card purchased with reward points* as the dependent variable and the subjective value of an email gift card and reward points as predictors was significant (*F*(2, 96)=100.41, *p*<.001, R_a^2=.67), as were both coefficients (Standardized βs=.54 and .36 for email gift card and reward points respectively, *t*s=7.23 and 4.79, *p*s<.001). A similar regression on the subjective value of *a gift card purchased with cash* with the subjective value of an email gift card and cash as predictors was also significant (*F*(2, 94)=76.39, *p*<.001, R_a^2=.61), with both coefficients significant (Standardized βs=.74 and .15 for email gift card and cash respectively, *t*s=11.41 and 2.35, *p*s<.05).

Study 4 (n=162 undergraduates) used a one-way four level design. Participants were asked to imagine that they had gone to a holiday party and brought a gift of $50 in one of four forms: cash, a gift certificate purchased with cash, a gift certificate purchased with credit card points, and a gift certificate purchased with airline miles. Ironically, the participant returned with the same gift that they brought to the party (an elaborate guise to theoretically test the idea that form of the source affects spending), and estimated how much they would spend in a subsequent shopping task. Participants then rated cash, credit card, gift card (GC) paid for with cash, GC paid for with credit card points, GC paid for with airline miles, credit card points, and airline miles on a set of seven-point scales (1=Not at all/7=Very): accepted, legal tender, familiar, and how salient the amount spent was at the time of purchase.

Participants reported being willing to spend the least (M=$32.44) in the $50 cash condition, followed by the GC-cash (monopoly money condition: M=$37.64); both of which were lower than the two *malleable* monopoly money conditions (GC-points=$46.46 GC-miles=$53.00; overall *F*(3, 157)=6.57, *p*<.001, η^2=.111). Additionally, judgments of the GC-cash were significantly different from those of GC-points and GC-miles for all scales (all *t*s > 5.00, *p*s<.05). Regression analyses on the scales replicate Study 3 results.

Finally, studies 5a, 5B, and 5c (n=522 mTurkers, 182 undergraduates, 301 mTurkers) demonstrate that these effects also hold for legal tender: when an unexpected windfall of $100 is received, it

is valued less when it is converted from a foreign currency (versus US$).

Overall, across studies, we show a second-order effect of form, and that the form of a source of money has a sticky effect that percolates to its new form. This effect of the *form of the source* is termed the *Malleable Monopoly Money* phenomena. This paper adds to the literature on the effects of the source of money by showing one other facet of source beyond whether it is current or future income/ asset (Shefrin and Thaler 1988), and whether it is a windfall or not (Arkes et al. 1994): its physical form. It adds to the literature on the effect of the forms of money by showing that the physical form of money (credit card, gift certificate, foreign currency, cash denominations) can have a second-order effect. It also adds to the literature on the effects of forms of money by investigating new currencies that are commonly held by consumers: loyalty points and miles.

Beliefs about Future Wealth Impact Financial Decisions

EXTENDED ABSTRACT

When consumers make financial decisions, they need not only think about their current financial situation, but also how their situation might change in the future. The present work investigates how people think about future wealth and how these beliefs impact investment decisions.

Participants (N = 199) in Study 1 saw current asset and debt levels for 20 hypothetical financial profiles and estimated what these asset and debt levels would be in one year. For a random half of participants, the net worth of the profiles was positive and for half it was negative. The value of assets and debts varied across profiles from small (e.g., assets = $67,000, debt = $1,000 in the positive set) to large (e.g., assets = $257,000, debt = $191,000 in the positive set), with the net worth held constant for all profiles in a set. Participants were generally optimistic about the future, predicting that assets would grow over the course of one year while debts would shrink (Zs > |6|; ps <.001). This pattern held for both individuals with positive and negative net worth.

To examine whether predictions were consistent with real world outcomes, we examined changes in individuals' assets and debts from 2013 to 2015 using data from the Panel Study of Income Dynamics (PSID). During this two-year period, 54% of individuals with positive net worth and 58% of individuals with negative net increased their assets, and 59% of individuals with positive net worth and 66% of individuals with negative net worth decreased their debts. While the majority of individuals in the PSID data followed the general patterns predicted by participants, there are many individuals in this data set who show the opposite pattern, where assets shrink and debts grow. Predictions of participants in Study 1 were generally optimistic and did not reflect the mixed reality demonstrated in the PSID.

Studies 2 (N = 196) and 3 (N = 196) examined whether and how beliefs about future wealth impact investment decisions. In these studies, participants completed two tasks (randomly ordered): a prediction task similar to Study 1 except from a first person perspective and a choice task involving decisions about savings accounts. On each trial in the choice task, participants were given a financial profile (the same set of profiles as in the prediction task) and told that they could invest half of their assets in either a traditional savings account offering 2% interest or a prize-linked savings account offering no interest, but a 1/125 chance of winning a large amount of money in one year (equivalent in expected value to the 2% interest). Study 2 used the same financial profiles as in Study 1. Study 3 used a new set of financial profiles where the value of assets was fixed at either a small or large value (varied between participants) and the net worth ranged from negative to positive.

The pattern of predictions in both Studies 2 and 3 were similar to those in Study 1. Participants generally predicted that assets would grow and debts would shrink. Across the choice task in both studies, participants favored the traditional savings account and selected the prize-linked savings account more often when assets were small as compared to large. In Study 2, the choice proportion for the prize-linked savings account was 0.36 for positive and 0.39 for negative net worth profiles. A generalized linear mixed-effects (GLME) model with by-item random effects showed a main effect of asset value (p < .001) and an interaction between asset value and net worth (p = .002). In Study 3, the choice proportion for the prize-linked savings account was 0.36 for small asset profiles and 0.24 for large asset profiles. GLME results showed a main effect of asset value (p < .001).

Using Hierarchal Bayesian methods, we fit the choice data in Studies 2 and 3 using three different variants of Cumulative Prospect Theory (CPT; Tversky & Kahneman, 1992) arising from different ways of specifying the reference point. In the first version, the reference point was neutral (i.e., set to zero). In the second version, the reference point was determined from the results of the prediction task. For each trial in the choice task, we calculated the predicted growth rate for the assets on that trial using the results of the prediction task. Specifically, growth rate is defined as gr = (Future Value – Present Value)/ Present Value where 'Future Value' are participants' predictions. Using these growth rates, we set the reference point to be the growth rate multiplied by the investment amount on each trial. Since participants generally believe that assets will grow, these reference points are positive and represent an optimistic outlook for the future. In the third version of CPT, we used the same reference points as the second version, but flipped the sign (i.e., -1 times the reference points calculated using the future prediction task). This model assumes a pessimistic view of the future where assets shrink rather than grow. Model comparisons strongly favored the second version of CPT with the reference point determined from the prediction data. The other two versions of the model underpredicted choices of the prized-linked savings account. In particular, the model with the pessimistic reference point (version three), predicted almost no choices of the prize-linked savings account. These findings suggest that people's optimistic views for the future serve as reference points and encourage risk-taking behavior (e.g., by making the small amount of interest earned in the traditional savings account look like a loss).

In sum, we show the people generally have a positive outlook on the future, believing assets will grow and debts will shrink. While this belief is consistent with reality for many individuals, it does not reflect the more general nature of how people's financial situations might change in the future. Using computational modeling, we show that these optimistic views of the future serve as reference points when making investment decisions. In particular, we found optimism increased choices for riskier savings accounts (i.e., prize-linked accounts) over traditional savings accounts.

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Living in a Socially Connected World:
The Impact of Others' Face-to-Face and Virtual Presence on Consumer Behavior

Chairs: Yanping Tu, University of Florida, USA
Szu-chi Huang, Stanford University, USA

Paper #1: The Curvilinear Effect of Crowdedness on Consumer Misbehavior

Camilla Song, University of Florida, USA
Yanping Tu, University of Florida, USA
Szu-chi Huang, Stanford University, USA

Paper #2: Graded and Context-Dependent Technology Associations: Why Using a Smartphone Can Signal Both More and Less Social Connection

Ann E. Schlosser, University of Washington, Seattle, USA
Rebecca W. Hamilton, Georgetown University, USA

Paper #3: Feeling Bad for the Brand: Encouraging Positive Consumer Reactions to Unfair Negative Reviews through Empathetic Responding

Thomas Allard, Nanyang Technological University, Singapore
Lea H. Dunn, University of Washington, USA
Katherine White, University of British Columbia, Canada

Paper #4: The Impact of Feedback on Recommendations: What Happens When Others Dislike the Recommendation

Virginia Weber, Deakin University, Australia
Jennifer Argo, University of Alberta, Canada
Sarah Moore, University of Alberta, Canada

SESSION OVERVIEW

Consumers are living in an increasingly connected world. Social others are constantly present, whether interactions are face-to-face or virtual. Given the profound influence of social contexts on consumption behavior (e.g., Dahl, Manchanda, and Argo 2001; Huang 2018; Ratner and Hamilton 2015; Tu and Fishbach 2015; White and Argo 2014; Wu, Moore, and Fitzsimons 2018), this symposium aims to shed further light. We examine both (1) the impact of others' mere physical presence (Papers 1-2) and (2) the impact physically and virtually present others who provide information (Papers 3-4), and demonstrate downstream consequences including consumer misbehavior (Paper 1), person perception (Paper 2), consumption decisions (Paper 3) and motivation to make product recommendations (Paper 4).

The first two papers examine the impact of the presence of others in a face-to-face context. **Song, Tu, and Huang (Paper 1)** show that the crowdedness level in an environment exerts a *curvilinear* impact on consumer misbehavior (e.g., getting soda without paying at a self-serve beverage station); the odds of misbehaving first increases and then decreases with the increase of crowdedness. They further propose that a shift of crowd construal (perceiving others as individuals or a single entity) underlies this effect.

Schlosser and Hamilton (Paper 2) show that person perception can be moderated by the presence of others. They find that when a target person is alone, using a technology product associate with affiliation, such as a smartphone, leads observers to perceive the target as more socially connected than a person who uses a technology product not associated with affiliation, such as a laptop. However, this effect reverses when the target person is part of a small group.

The next two papers explore the impact of both virtual and physical presence of others who provide information. **Allard, Dunn, and White (Paper 3)** ask whether negative reviews always hurt and identify fairness as a critical moderator. They find that consumers

actually exhibit more favorable responses (e.g., increased patronage intentions and actual purchases) toward a business that received underserved negative reviews from others, because they feel empathetic and wish to restore fairness.

Weber, Argo and Moore (Paper 4) examine how feedback from virtual others influences subsequent motivation to recommend experiences. They show that when consumers make an other-focused recommendation, negative (versus positive) feedback decreases the likelihood of continuing to recommend that experience; on the contrary, when consumers make a self-focused recommendation, consumers continue recommending the same experience, because self-focus can act as a protective shield against the threat from negative feedback.

Collectively, these papers (reporting 19 studies) document the impact of social presence on consumer behavior both offline and online. The findings also offer practical insights on how managers can reduce consumer misbehavior (Paper 1), modify consumers' reactions to negative reviews (Paper 3), and sustain consumers' motivation to recommend experiences (Paper 4), as well as how consumers can avoid making negative impressions on others (Paper 2). We believe this symposium will attract a wide audience of researchers interested in social influence, word of mouth, and impression management.

The Curvilinear Impact of Crowdedness on Consumer Misbehavior

EXTENDED ABSTRACT

Consumer misbehavior (e.g., "forgetting" to scan a candy bar at a self-checkout counter, getting soda without paying for it at a self-serve beverage station) is prevalent and costly for companies. While single misbehavior appears trivial, the consequence is huge at a collective level. One critical constraint of this problem is that explicit monitoring from employees is usually weak, and the main source of guardianship actually comes from the presence of other customers. The number of other customers (i.e., crowdedness in the environment), however, can vary significantly across the time of the day. Hence, a question of both theoretical and practical importance is whether and how different levels of crowdedness can influence consumer misbehavior.

We propose that the impact of crowdedness on consumer misbehavior follows a *curvilinear* pattern; the odds of misbehaving will increase when the level of crowdedness increases from low to moderate, and then decrease when the level of crowdedness increases from moderate to high. We further propose a parsimonious cognitive account for this curvilinear pattern– a shift of crowd construal in evaluating other's attention. Specifically, when the level of crowdedness is low, people construe others around them as distinct individuals and ask "how many individuals" might pay attention to them (i.e., absolute thinking). As a result, people perceive greater attention when the environment is more crowded (Dahl, Manchanda, and Argo 2001), which lowers their odds of misbehaving. However, when the level of crowdedness is high, people begin to construe others as a group (i.e., a single entity; Whitney and Leib 2018) and ask "what percentage of the group" might pay attention to them (i.e., proportional thinking; Bartels and Burnett 2011). Because the percentage decreases as the

crowd size continues to get larger (e.g., only 5-10 people nearby can notice the misbehavior, as crowd size continues to increase from 30 to 100), people perceive less attention when the environment is more crowded, which increases their odds of misbehaving.

We first conducted an observational study in a fast food restaurant (Study 1). We recorded whether a customer stole soda (i.e., got a water cup for free yet filled it with soda) or not at a self-serve soda fountain. We counted the number of customers in the restaurant every 5 minutes, and used it as a proxy for crowdedness. In support of our hypothesis, we found a quadratic effect of crowdedness on odds of stealing soda ($\beta = .001$, $Wald = 4.21$, $p < .05$). Specifically, people stole soda less when the level of crowdedness was moderate ($M_{moderate}=8.4\%$) than when the level of crowdedness was low and high ($M_{low}=14.5\%$, $M_{high}=14.8\%$; $\beta=-.21$, $Wald=3.91$, $ps<.05$).

We next replicated the curvilinear effect in a controlled lab setting, using a different type of misbehavior (Study 2). We immersed participants in a 360-degree Virtual Reality video about a park that varied in crowdedness (low, moderate, high) and asked them to step 480 times on a stepper for 8 minutes. We emphasized to them that it was very important that they follow the instruction "to help science," and used the number of steps as a misbehavior (i.e., cheating in the research study). In support of our hypothesis, we found a quadratic effect of crowdedness on odds of stealing soda ($t(154) = -4.06$, $p < .001$). Specifically, participants cheated less when the level of crowdedness was moderate ($M_{moderate} = 2.68$, $SD_{moderate} = 88.45$) than when the level of crowdedness was low and high ($M_{low} = 83.67$, $SD_{low} = 118.13$; $M_{high} = 60.68$, $SD_{high} = 96.41$; $ps<.05$).

Having demonstrated the main effect using real misbehaviors and in both a real and controlled setting, we next directly measured the proposed mediator (perceived attention) and linked it to the odds of misbehaving. Study 3 used a 3 (crowdedness: low vs. moderate vs. high) within-participants design. We asked participants to imagine themselves at a food court with other customers, and provided them with a visual aid in which we used human silhouettes (1, 10, and 100 silhouette; randomized order) to represent others, a common method used in crowding research (O'Guinn et al. 2015; Huang, Huang, Zhong, and Wyer 2018). Participants then imagined that they were standing in front of a self-serve soda fountain and felt tempted to fill their water cup with soda. Participants rated to what extent others may notice them and their likelihood to steal soda. In support of our hypothesis, in the moderately crowded condition participants reported perceiving greatest attention ($M_{moderate}=3.67$) than the other two conditions ($M_{low}=3.17$, $M_{high}=3.41$; $F(1,115)=5.38$, $p<.03$), as well as the lowest intention to steal soda ($M_{moderate}=2.66$) than the other two conditions as well ($M_{low}=2.78$, $M_{high}=2.91$; $F(1,115)=3.24$, $p=.075$).

Study 4 investigated our proposed cognitive mechanism, a shift of crowd construal and, subsequently, a reliance on absolute to proportional thinking in estimating attention. This study used a 5 (crowd size: 1, 4, 10, 30, vs. 100 human silhouette(s)) between-participants design. Participants imagined a similar scenario as in study 3, reported how their perception of the crowd (distinct individuals or a single entity), perceived attention, the absolute number of people who may notice them (i.e., absolute thinking), and the proportional of people who may notice them (i.e., proportional thinking). We find that participants were more likely to perceive the crowd as a single entity when the crowd size increases ($F(4, 195) = 8.73$, $p < .001$) and replicated the curvilinear pattern for perceived attention ($F(1, 195) = 4.09$, $p < .05$). More importantly, supporting our proposed mechanism, absolute thinking mediated the effect of crowdedness on perceived attention when the level of crowdedness increases from low to moderate ($\beta=-.12$, 95% CI [-.28,-.04]), whereas proportional

thinking mediated the effect of crowdedness on perceived attention only when the level of crowdedness increases from moderate to high ($\beta=-.07$, 95% CI [-.18,-.00]).

Taken together, we document the impact of the whole spectrum of crowdedness on consumer misbehavior, as well as offer a parsimonious cognitive account for the identified curvilinear pattern. Our findings offer insights on how marketers can leverage the power of informal social monitoring for managing stores more cost-effectively.

Graded and Context-Dependent Technology Associations: Why Using a Smartphone Can Signal Both More and Less Social Connection

EXTENDED ABSTRACT

Consumers are often observed by others as they use technology products such as smartphones and laptops. Despite the similar functions performed by a smartphone and a laptop, such as sending and receiving emails, managing one's calendar, or searching for information, their perceived affordances differ. Perceived affordances depend on what observers think the technology user is doing or trying to accomplish, and which needs are being fulfilled by using the technology (Norman 1999). For example, smartphones, which are often used to communicate with others, tend to be associated with affiliation needs, leading to inferences about social connection (e.g., how popular and well-liked a person is). In contrast, laptops, which are often used to work and access information (Schlosser 2003), tend to be associated with achievement needs, leading to inferences about busyness.

Theories of person perception suggest that observers form impressions of others based on their actions (Kammrath Mendoza-Denton and Mischel 2005; Kelley 1972) and that the associations of products transfer to their users (Escalas and Bettman 2005). Once these technology associations have been established, the mere presence of a technology can cue these associations (Schlosser 2003). We extend this research by investigating how technology associations differentially affect perceptions of users based on a) their level of interaction with the technology and b) the social context in which the technology is used. Akin to graded category membership (Rosch 1975), we propose that greater interaction with a technology will increase the technology association, and thus, the degree to which observers infer that a user inherits a technology's associations (H1). Turning to social context, because smartphones are associated with affiliation, we find that their usage competes with the demands of affiliating with others in a small group. Consequently, using a smartphone reduces perceived social connection when the user is in a small group, but not when alone (H2-H3). In contrast, using a functionally similar technology (a laptop) in a small group does not reduce perceived social connection because it triggers different associations (achievement). Such a prediction extends recent research showing that using the same product may create different impressions depending on whether its use is normative or counternormative in the setting (Bellezza, Gino and Keinan 2014) by linking this reversal to product-specific usage associations. By demonstrating that perceptions of technology users depend on both technology-specific associations and the social context, we provide new insights into person perception.

We test our predictions across a pilot study and five experimental studies. In the pilot study, we show that despite the similar actual affordances of smartphones and laptops, these two technology products differ in their perceived affordances: smartphones are associated more with affiliation, while laptops are associated more

with achievement. In our first study, we show that technology associations depend on the user's level of interaction with the technology (H1: graded product associations). Furthermore, we show that level of technology interaction affects observers' inferences about social connection, and thus, being in demand by employers, and these inferences are moderated by the social context (H2-H3). In our second study, we replicate our finding that different types of technology (e.g., laptops vs. smartphones) have different associations. As a result, using a smartphone and using a laptop cause observers to draw different inferences about the social connection of their users. In our third and fourth studies, we show that technology associations differ for users and non-users of the technology and that observers' inferences differ for users and non-users. Furthermore, changing the observer's beliefs about how the technology is being used moderates the effect (H4). For example, in studies 4 and 5, we find that when a smartphone is being used in a non-competitive rather than competitive manner (i.e., to affiliate with the face-to-face group rather than affiliate with a virtual other), the perceived social connection of someone using a smartphone in a group is comparable to that of someone not using a smartphone in a group. Furthermore, in our last study, we observe these effects even when the group norm supports smartphone usage (i.e., everyone in the group is using a smartphone).

Clearly, the ubiquity of multifunctional technology products like smartphones and laptops introduce new challenges for consumers trying to interpret others' behavior and manage others' impressions of themselves. By examining observers' perceptions of technology use, we are able to push the boundaries of person-perception research by showing that different inferences may be made about the same person using the same technology in the same public setting depending on how intensively they are interacting with the technology and whether they are using the technology in a small group or while alone. To effectively decode others' behavior and manage others perceptions of them, consumers must understand the perceived affordances of the technologies they use, the settings in which these perceived affordances may create negative impressions, and how to interact with the technologies to avoid these negative impressions. As technology has become more complex in the twenty-first century, so has person perception and impression management.

Feeling Bad for the Brand: Encouraging Positive Consumer Reactions to Unfair Negative Reviews through Empathetic Responding

EXTENDED ABSTRACT

Managing negative reviews is an important task for companies. This is because WOM is viewed as being more authentic, relevant, and unbiased than communications that stem from the company itself (Friestad and Wright 1994). Within the WOM literature, negative reviews lead to less favorable firm evaluations, and positive reviews lead to more favorable firm evaluations (e.g., Chevalier and Mayzlin 2006; Fornell and Westbrook 1984). Both types of reviews, negative and positive, greatly influence consumer decision-making (Basuroy, Chatterjee, and Ravid 2003), but negative reviews are often the most impactful (Chen and Lurie 2013; Mizerski 1982).

However, the increasing influx of online reviews has left managers conflicted on how to deal with common public displays of customer disgruntlement, which may or may not accurately reflect the quality of the firm's products and services (e.g., O'Brien and Hosany 2016). In this research, we examine the reactions of third-party observers to negative reviews of a focal firm that are perceived to be unfair based on the firm's performance. We draw upon work on empathetic responding in person-to-person contexts (Batson and Ah-

mad 2001) to argue that when consumers perceive a negative review to be unfair, they experience empathetic concern for the firm being wronged. In turn, these feelings of empathy trigger favorable consumer responses toward the focal firm, such as increased patronage intentions and actual purchases, in order to restore a sense of justice fairness.

Study 1 (n = 75, field sample) offers an initial real-world test of the hypothesis that exposure to unfair WOM can influence an observer's subsequent response in a meaningful choice context. We operated a pop-up, with all proceeds donated to a local food bank. In both the control and unfair conditions, a confederate stood nearby, acting as another customer. When a customer approached, the confederate addressed the representative by either simply saying, "Thank you," and walking away without making a purchase (control) or "Is this organic? Why would you serve non-organic products? I'm going to pass," and then walk away without making a purchase (unfair negative). Participants could then make their iced-tea purchase. Consistent with our key prediction, consumers paid significantly more for the iced tea in the unfair negative-review condition (M = $2.92, SD = $1.84) compared to those in the control condition (M = $1.91, SD = $1.54; t(73) = 2.34, p = .01).

Study 2 (n = 182 Mturk sample) replicates this effect by comparing the unfair negative-review condition to both a fair negative-review condition and a positive-review condition. The reviews included a picture and described enjoyment of a "tasty full-meal breakfast" with coffee, which the reviewer liked, for a total of $12. However, in both negative conditions, the review included an additional negative remark about the price of coffee within the $12 combo. In the fair negative review, the meal and the coffee were priced at $7.50 and $4.50, respectively. In the unfair negative review, these items were priced at $11.50 and $0.50, respectively. Results revealed a significant effect of review type on patronage intentions (F(2, 179) = 10.76, p < .001). Importantly, patronage intentions were higher in the unfair negative (M = 4.80, SD = 1.69) compared to the positive (M = 4.04, SD = 1.97; t(179) = 2.33, p < .05) and the fair negative-review conditions (M = 3.24, SD = 1.67; t(179) = 4.63, p < .001). Patronage intentions were also higher in the positive compared to the fair negative condition (t(179) = 2.48, p = .01). Importantly, mediation analyses revealed that heightened feelings of empathy for the firm in the unfair-negative condition predict the difference in patronage intentions between the unfair negative and the fair negative conditions (b = 1.02, SE = .22; CI95 [.65, 1.54]) and between the unfair negative and the positive conditions (b = .97, SE = .21; CI95 [.62, 1.43]).

Study 3 (n = 205, MTurk sample) tested whether trait empathy moderates the effect of review type on consumer patronage intentions. Using a 3 (review type: unfair negative vs. fair negative vs. positive) X continuous (trait empathy) between-participants design in another review context, results from this study replicated those of study 2 and showed a moderating effect of trait empathy on patronage intentions. Study 4 (n = 320, student sample), replicate these finding in a different online restaurant review context using a low or high-empathy manipulation procedure (Batson and Ahmad 2001).

Study 5 (n = 487; Mturk sample) tests a managerial intervention to enhance empathetic response. We asked participants to read an online review from a consumer who had recently ordered a set of garden tools from a hardware store. Constant across the conditions, the consumer received the tools in good conditions, but noted that the selection was limited. In the positive review, the customer gave a 4-star review and did not provide further information. In the fair negative-review condition, the customer gave a 1-star review and added a complaint about the firm for shipping delays. In the un-

fair negative-review condition, the customer complained about the postal service (USPS) for shipping delay. The firm then responded in a high-empathy (personalized) or a low-empathy (non-personalized) manner. Importantly, purchase intentions following the unfair negative review with high-empathy responses were not significantly different from the positive review conditions (t's < 1), whereas these two condition were each significantly different from the unfair negative review condition with a low-empathy response (low-empathy response: t(472) = 2.36, p < .05; high-empathy response: t(472) = 3.16, p < .01). These results demonstrate that utilizing a personalized approach evokes higher empathy for the firm regardless of whether the negative review is perceived to be fair or not.

Taken together, those results support the notion that undeserved negative reviews can draw sympathetic consumer responses due to heightened feelings of empathy toward the firm. Importantly, we show that managers can increase empathetic responses towards their firms by simply changing to more personable responses when dealing with undeserved negative reviews.

The Impact of Feedback on Recommendations: What Happens When Others Dislike the Recommendation

EXTENDED ABSTRACT

Consumers constantly make recommendations to others (e.g., songs to hear, movies to watch). Often, the recipient will follow the recommendation and later tell the recommender what they thought of the experience. What are the implications of this feedback? Currently, the answer is unknown. In this research, we seek to address this void by exploring the impact of feedback valence (i.e., whether the recipient finds the recommended experience positive or negative) and the recommender's focus (self vs. other) on whether the recommender continues to engage in word of mouth (WOM) for this experience.

In keeping with prior research on feedback (Baumeister et al. 2001; Bloom and Hautaluoma 1987), we predict that after making a recommendation and receiving positive feedback about the experience, recommenders will continue spreading WOM about it, whereas negative feedback will result in decreased subsequent WOM. This is because negative feedback will be threatening to consumers (Steele 1988), causing them to distance themselves from the experience they have recommended (Ward and Broniarczyk 2011; White and Argo 2009).

However, this may not always be the case. When the recommender makes an other-focused recommendation (i.e., they take their recipient's preferences into account when recommending; Barasch and Berger 2014) we expect this effect to hold. This is because another person disliking a recommendation specifically tailored to them constitutes failing, which becomes threatening to the self (Steele 1988) and so causes the recommender to distance themselves from it. In contrast, when recommenders make self-focused recommendations (i.e., they base their recommendation solely on the self), we predict this self-focus acts as a protective shield against the threat from negative feedback. As such, recommenders who are self-focused should not decrease their subsequent WOM after negative feedback.

We test these predictions across five experiments. In each of the experiments, the basic procedure was as follows: participants were paired either ostensibly (online) or in person (lab), sampled experiences (movie trailers or songs) and made a recommendation from these experiences to their partner, after which they received (false) feedback about the degree to which their partner liked the experience, and then reported their subsequent WOM intentions.

Experiment 1a assessed the main effect of feedback (positive vs. negative), following the procedure outlined above and holding the recommender's focus constant as other-focus (N=206) by telling participants (N=206) to recommend the movie trailer their partner would like the best. Results revealed that participants who received negative feedback were less willing to continue recommending this experience relative to those who received positive feedback (M_{pos} = 5.16; M_{neg} = 4.55; t(201), p = .008).

Experiment 1b (N=301) extended these findings to include two control conditions to demonstrate that the effect was not due to positive feedback increasing subsequent WOM relative to neutral feedback or no feedback, for a total of 4 conditions (positive vs. negative vs. neutral vs. no-feedback). Results revealed a main effect of feedback on WOM intentions (F(3, 293) = 3.68, p = .012). Those in the negative feedback condition had lower WOM intentions than those in the neutral (M = 5.19; p = .035), positive (M = 5.36, p = .003), or control (M = 5.13, p = .006) conditions, which did not differ (ps > .4).

Experiment 2 employed a self-affirmation task (Steele 1988) to provide evidence of threat as the underlying process. This study (N=446) was a 2 (feedback: positive vs. negative) by 3 (affirmation: before vs. after vs. no-affirm control) design. In the affirm-before condition, participants completed a self-affirmation task before receiving feedback; in the affirm-after condition, this occurred after the feedback. In the no-affirm condition, participants did not complete a self-affirmation task. Results revealed a significant interaction (F(2, 435) = 3.01, p = .05). As expected, in the no-affirm condition, participants were less likely to continue recommending after negative feedback (M_{pos} = 5.84; M_{neg} = 4.44; p < .0001). In the affirm-after condition, this difference became marginal (M_{pos} = 5.39; M_{neg} = 4.99; p = .092), and was attenuated in the affirm-before condition (M_{pos} = 5.55; M_{neg} = 4.84; p > .6). As such, only being bolstered against this threat before it occurs is sufficient in fully attenuating its impact.

Experiment 3 aimed to provide evidence for the moderating role of self-focus. This study was run in the lab using a 2 (feedback: positive vs. negative) by 2 (focus: self vs. other) design. Participants (N=103) were told to select the movie trailer they believed their partner would like the best (other-focus), or the one they liked the best (self-focus). Results revealed a significant interaction (F(1, 95) = 4.07, p = .047). When participants made other-focused recommendations, they were less likely to continue recommending the trailer after receiving negative feedback (M_{pos} = 5.36; M_{neg} = 3.88; p = .001); when participants were self-focused, this effect was attenuated (M_{pos} = 5.60; M_{neg} = 5.15; p > .5).

Experiment 4 (N=94) was also a 2 (feedback: positive vs. negative) by 2 (focus: self vs. other) design. For generalizability and robustness, participants recommended any song of their choosing to their partner. Further, recommendation focus was manipulated by telling participants that their partner had the same music preferences as they did (self-focus) or that they had different preferences (other-focus), as prior literature finds that greater self-other overlap increases egocentrism (i.e., self-focus; Savitsky et al. 2011; Tu, Shaw, and Fishbach 2016). Otherwise the procedure was the same as outlined above. The interaction was significant (F(1, 89) = 9.80, p = .002); other-focused participants were less willing to continue recommending the song (M_{pos} = 6.32; M_{neg} = 4.78; p = .001), whereas when participants were self-focused, this effect was attenuated (M_{pos} = 5.74; M_{neg} = 6.04; p > .4).

In sum, negative feedback on one's recommendations can decrease subsequent WOM, but only when a consumer makes a recommendation with their recipient's preferences in mind. This work contributes to research on WOM by introducing the notion of feedback

to this literature, and contributes to work on threat by demonstrating that self-focus can provide a protective barrier against threat.

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Helping Consumers Make Wise Choices About Food

Chair: Holly Howe, Duke University, USA

Paper #1: Would You Like Fries With That? Modeling the Default Effect in Dietary Choice

Nicolette Sullivan, Duke University, USA
Samyukta Doré, Duke University, USA
Alexander Breslav, Duke University, USA
Scott Huettel, Duke University, USA

Paper #2: Sacrifices Must be Made: The Preference for Trading Off Type or Quantity Among Restrained Versus Unrestrained Eaters

Peggy Liu, University of Pittsburgh, USA
Kelly Haws, Vanderbilt University, USA

Paper #3: Using a Novel Online Grocery Platform to Explore How Front-of-Package Labelling Affects Consumers' Food Choice

Holly S Howe, Duke University, USA
Gavan Fitzsimons, Duke University, USA
Peter Ubel, Duke University, USA

Paper #4: How Do Nutrition Promotions Impact Shoppers' Sensitivity to Price Promotions?

Meheli Basu, University of Pittsburgh, USA
Hristina Nikolova, Boston College, USA
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SESSION OVERVIEW

Many consumers have a goal to eat healthy (Snook et al., 2017). When consuming a healthy diet, individuals are simultaneously lowering their risk of nutrition-related illnesses (WHO, 2002) and increasing their energy levels and cognitive performance throughout the day (O'Connor, 2006). Despite these benefits, consumers often overeat and fail to meet their nutrition goals. Although overeating is often conceptualized as a failure of willpower, a consumer's environment also plays a large role in whether he or she overconsumes (Loewenstein, 2000).

A growing literature on nudges demonstrates that small changes to choice environments can impact how consumers behave (Thaler & Sunstein, 2009). The purpose of this session is to examine ways in which retailers can modify the decision environment to simultaneously improve consumer food-related decision making and grow the retailer's profit.

Four papers examine facets of the decision environment that affect consumers' food choice decisions. Papers 1 and 2 explore how consumers process health information and how retailers can use this information to promote healthier choices. Paper 1 finds that changing the default option (e.g., fries with a hamburger) can shift consumers' attention, and prompt them to make healthier choices. Paper 2 demonstrates that consumers have differing preferences when it comes to restricting their caloric intake restrained eaters prefer to eat diet options in larger portions, while unrestrained eaters prefer to eat indulgent options in smaller portions. This suggests that retailers should offer both options (e.g., low-calorie, and small portion) to appeal to distinct consumer segments. Papers 3 and 4 examine how front-of-package (FOP) labels specifically can alter consumer behavior and store profits. Paper 3 tests the efficacy of FOP labels in an online store context. Using newly developed online shopping software, the authors demonstrate that FOP labels can prompt consumers to make healthier food choices when shopping. Paper 4 demonstrates that food retailers who add health labels to their weekly circular increase

their weekly sales in advertised product categories. This increased spending is especially pronounced in nutrition conscious consumers. Together, papers 3 and 4 demonstrate that grocery retailers can use labels to improve consumers' decision making while also improving sales.

In sum, these papers provide insight into how changes in the grocery environment can alter consumers' choice and the store's sales. In addition to adding conceptually to the literature on health nudges, these papers use an array of methodological strategies eye tracking, survey research, field studies, and a mock online store which may be of interest to health researchers. This session should have broad appeal to researchers studying health and nutrition, nudges, and consumer decision making.

Would You Like Fries With That? Modeling the Default Effect in Dietary Choice

EXTENDED ABSTRACT

Introduction

Consumers often have at least two competing goals when making dietary choices: the desire for tasty foods and the desire to be at a healthy weight. The difficulty in achieving both goals simultaneously is evidenced by continued rises in obesity rates, despite surveys suggesting that 50% or more of obese Americans are actively dieting at any time (Snook et al., 2017). Individual obesity has been linked to a prominent feature of the choice environment: the prevalence of unhealthy foods (Burgoine, Forouhi, Griffin, Wareham, & Monsivais, 2014; Swinburn, Egger, & Raza, 1999). For example, french fries, not carrots, are the default accompaniment at nearly all fast food restaurants. Although unhealthy defaults are likely to contribute to the obesogenic environment, they also present an opportunity to improve choices by switching them for healthier options. An improved understanding of how default options shape dietary choices could identify approaches for changing choice architecture, and thus improving choices without needing to alter consumers' underlying preferences (Johnson et al., 2012).

In addition to their designation as the default, defaults can influence choices through at least three distinct pathways. First, moving away from the default is often *effortful*, requiring additional physical actions, mental processing, or interaction (Dinner et al., 2011). Second, consumers may lack *awareness* of alternative options, especially in complex retail environments. Third, customers often have greater *familiarity* with the default option. Field and lab experimental defaults often feature at least one of these additional advantages, preventing a thorough understanding of the influence of default status alone. To isolate the influence of the default status itself on healthy choice, we designed a task in which both the default and alternative 1) were equally effortful to select (both required a button press), 2) were equally familiar, and 3) participants were equally aware of both options.

Methods

Across two experiments, participants made choices about pairs of common snack foods that varied in their healthfulness and tastiness. Across a total of 300 trials, we varied whether there was a tastier but less healthy default option ("*Indulgent default*"), a healthier but less tasty default option ("*Disciplined default*"), or no default at all

("*Baseline*"). Each trial's food pairs were chosen based on each participants' idiosyncratic taste and health food ratings. To encourage participants to take the task seriously, one randomly-chosen trail was actualized, and the participant ate the food they chose on that trial.

In Study 1 ($N = 52$), we employ a between-subjects design in which participants read a script embedded in the task instructions to either encourage health- or taste- related goals. In Study 2 ($N = 40$), participants were not given this script. For both studies, we measured the focus of attention using eye tracking, and used drift diffusion modeling (DDM) to pinpoint the default's influence on key parameters of the decision process. This allows us to characterize how default options alter the cognitive processes that in turn lead to their advantage in choice and how healthy defaults may work to improve choice.

Results.

In both experiments, participants selected the default more than the alternative (Study 1, mean = 54%, $t(50) = 7.61$, $p < 0.001$; Study 2, mean = 54%, $t(38) = 5.48$, $p < 0.001$). This resulted in choices that were healthier in the Disciplined default condition, both compared to the Indulgent default condition, and the Baseline condition ($p < 0.001$). The default received significantly more attention than the default across both experiments (Study 1 mean difference = mean = 7%, $t(50) = 10.64$, $p < 0.001$; Study 2 mean difference = 8%, $t(38) = 8.59$, $p < 0.001$). Drift diffusion modeling suggests that the weight placed on the default's reported wanting during option comparison was greater than that that of the alternative option, suggesting that the status of the default gives that food a "value boost." Further, there was an initial bias toward the default at each trial's outset, giving the default a "head start" in option comparison. Using regression analysis, we estimate the relative influence of each of these advantages on choice, and find that the additional proportion of gaze to the default is the largest driver of the default bias. Despite this, the "value boost" given to the default option remains a significant driver of choice, suggesting that the default designation imparts some significant value enhancement to the option that promotes its selection.

Conclusion.

In two independent experiments, we tested the power of default options to bias choice while holding many common features of them such as the ease of choosing them constant across both the default and alternative option. Despite this, we still find a significant bias toward choosing the default even when it is healthier and less tasty than the alternative. Using both eye tracking and modeling, we pinpoint the ways in which default status influence the decision process, such as the additional attention devoted to it. These results suggest several promising interventions. For example, menu presentation that increases gaze time to healthier options, such as with highlighting or order of presentation, may be promising avenues for future interventions. However, gaze bias does not explain away the default effect; the default receives an additional "value boost" that influences choice even when controlling for attentional effects. This suggests that simply substituting unhealthy defaults like french fries and soda for healthier options could have a profound influence on consumer choice.

Sacrifices Must be Made: The Preference for Trading Off Type or Quantity Among Restrained Versus Unrestrained Eaters

EXTENDED ABSTRACT

Ideally, consumers would prefer to eat tasty, enjoyable foods in desired quantities without health consequences. However, goals to lose or manage weight can necessitate caloric intake sacrifices. We conceptualize two fundamentally different sacrifice forms: sacrificing the type(s) of food or the quantities consumed. Although food marketers cater to both kinds of sacrifice, and much research examines each kind of sacrifice separately, relatively little is known about how these two kinds of sacrifice differ. We present five studies examining perceptions of and preferences for sacrificing type versus quantity (holding caloric change constant), considering the moderating role of dietary restraint. We examine dietary restraint, as it is an important eating individual difference that may shape many consumer psychological phenomena (Bublitz, Peracchio, & Block, 2010).

This research thus offers a novel perspective on how two main sacrifice routes that entail the same caloric decrease are differentially perceived, and for understanding preferences and goal-based differences between restrained and unrestrained eaters. This is important because marketplace offerings address each sacrifice route and food type and quantity are of theoretical interest yet typically examined separately despite being joint inputs to total intake.

Studies 1-3 test our prediction (drawing from theorizing about goals, as detailed in Studies 4-5) that dietary restraint will predict preferring to sacrifice type over quantity, such that restrained eaters will prefer sacrificing type, whereas unrestrained eaters will prefer sacrificing quantity.

Study 1 ($N=178$) tested this prediction using real snack choices. Participants were told that a company traditionally selling medium-sized buttered popcorn bags (200 calories) was planning to add two new popcorn options: one new bag was "the same size but 94% fat-free and thus half the calories" (sacrificing type) and the other was "half the size and thus half the calories" (sacrificing quantity). Participants chose a snack bag and completed three measures of dietary restraint: a 9-item scale from Stice (1998), a 10-item scale from Herman and Polivy (1980), and a one-item chronic dieting measure. Fifty percent of participants selected each snack bag, and all three measures of dietary restraint predicted choosing to sacrifice type versus quantity (all ps < .05).

Study 2 ($N=154$) generalized these findings to eight stimuli sets involving various snacks, entrees, condiments, and desserts, and tested the unique role of dietary restraint amongst other eating-relevant individual differences. For instance, participants were asked which they would switch to, from a snack of a medium bag of BBQ potato chips (250) calories (1=*Definitely a small bag of BBQ potato chips (125 calories)*, 4=*Equal preference for each* option, 7=*Definitely a medium bag of light BBQ potato chips (125 calories)*). Participants' responses to the eight stimuli sets were averaged to form one preference index (1=sacrificing quantity, 4=equal preference, 7=sacrificing type (α=.82). Participants also completed a dietary restraint scale and additional individual differences (e.g., eating self-control, gender, BMI). As predicted, dietary restraint predicted preferences to sacrifice type versus quantity (r=.31, p<.001); no other eating-relevant individual differences did.

Study 3 ($N=210$) tested this prediction in a marketing context in which participants responded to ads advertising either a sacrificing via type product or a sacrificing via quantity product, instead of having both options pitted against each other. Using a 2 (advertisement: sacrificing type, sacrificing quantity)×dietary restraint be-

tween-subjects design, participants evaluated an advertisement from a company traditionally selling medium-sized buttered popcorn (400 calories). Participants read that the company planned to add a new option and viewed an ad either for a product with "the same size but 94% fat-free and thus half the calories" (sacrificing type condition) or "half the size and thus half the calories" (sacrificing quantity). Participants indicated their purchase intentions and completed a dietary restraint scale. Analysis revealed a significant interaction (B=.68, SE=.29, t=2.38, p=.018), such that unrestrained eaters had higher purchase intentions for the advertised product when it promoted sacrificing quantity (vs. type), whereas consumers with restrained eaters showed the opposite. See figure 1.

Studies 4 (N=104) and 5 (N=103) then tested our theorizing—built on integrating literature on food decision-making goals, and how such goals may differ across restrained and unrestrained eaters (Dhar & Simonson, 1999; Liu et al., 2015; Ogden & Wardle, 1990; Raghunathan, Naylor, & Hoyer, 2006). Specifically, we examined whether the two consumer segments have different perceptions of the sacrificing options (study 4) and different goal priorities (study 5). Study 4 tests whether both consumer segments perceive the sacrificing type option to be the healthier option and the sacrificing quantity option to be the more enjoyable option, and whether restrained eaters perceive the sacrificing type option to be the more filling option. Study 5 examines goal priorities, testing whether restrained eaters (relative to unrestrained eaters) prioritize health goals, deprioritize taste goals, and similarly prioritize fullness goals when making a food choice. Study 4 participants indicated which they would switch to if their typical snack of a medium buttered popcorn (400 calories) were unavailable (1=*Definitely a small buttered popcorn (200 calories)*, 7=*Definitely a medium 94% fat-free popcorn (200 calories)*). They then rated each of these two foods on perceived ability to address taste, health, and fullness goals, before completing a dietary restraint scale. Study 5 had a similar design, except rather than rating perceived ability to address goals, participants indicated the importance of addressing their health, taste, and hunger goals. Collectively, studies 4 and 5 show that the differing sacrificing preferences among restrained and unrestrained eaters occur because of the different weights placed on addressing health versus taste and the different fullness perceptions of the sacrificing quantity versus type options (ps<.05; figures 2a-2b).

These findings have theoretical implications for understanding two major routes to decreasing caloric intake, consumption and psychological motivational differences between restrained and unrestrained eaters, and health-taste-fullness trade-offs. They have practical implications for consumer welfare and for marketers about which route to health better appeals to various consumer segments. A final sixth study also shows how this perspective extends to examining sacrifices in the monetary spending domain, suggesting that we capture a broader phenomenon wherein those who chronically restrict resources sacrifice on type rather than quantity

Using a Novel Online Grocery Platform to Explore How Front-of-Package Labelling Affects Consumers' Food Choice

EXTENDED ABSTRACT

Promoting healthy food choice is critical to reducing nutrition-related chronic illnesses (WHO, 2002). Front-of-package (FOP) health labels may be a useful tool to signal the nutritional value of products to consumers. Some studies have shown that consumers who see FOP labels make healthier choices in (real or experimental) grocery stores (Hobin et al., 2017; Maubach, Hoek, & Mather, 2014;

Nikolova & Inman, 2015; Sutherland, Kaely, & Fischer, 2010)except for not labelling 0-star products. The largest supermarket retailer in Canada rolled out the Guiding Stars system in supermarkets across Ontario, Canada. The aim of our study was to examine the extent to which consumers respond to an on-shelf nutrition labelling system in supermarkets to inform current and future nutrition labelling policies and practices. Methods: Capitalizing on a natural experiment, we conducted a quasi-experimental study across 3 supermarket banners (or "chains". Other studies have found no effect (Aschemann-Witzel et al., 2013; Sacks, Tikellis, Millar, & Swinburn, 2011). Reviews on the topic generally conclude that the evidence for FOP labels is promising, yet inconclusive (Cameron, Charlton, Ngan, & Sacks, 2016; Escaron, Meinen, Nitzke, & Martinez-Donate, 2013)such settings are optimal for interventions aimed at influencing these decisions. The objective of this review was to synthesize the evidence on supermarket and grocery store interventions to promote healthful food choices. METHODS We searched PubMed through July 2012 to identify original research articles evaluating supermarket and grocery store interventions that promoted healthful food choices. We categorized each intervention by type of intervention strategy and extracted and summarized data on each intervention. We developed a scoring system for evaluating each intervention and assigned points for study design, effectiveness, reach, and availability of evidence. We averaged points for each intervention category and compared the strength of the evidence for each category. RESULTS We identified 58 articles and characterized 33 interventions. We found 7 strategies used alone or in combination. The most frequently used strategy was the combination of point-of-purchase and promotion and advertising (15 interventions.

Furthermore, although consumers are increasingly doing their grocery shopping online (Daniels, 2017), there has been no research on how FOP labelling affects consumer choice in online settings. There are several reasons consumers choices online might differ from their choices in brick-and-mortar stores. First, in online environments, retailers can label foods that traditionally remain unlabeled (e.g., produce, deli). Second, non-sensory attributes, like labels, exert a stronger effect on consumers in online (versus brick-and-mortar) environments (Degeratu, Rangaswamy, & Wu, 2000). Third, consumers shopping online (versus in-store) are more motivated by "should's" than "want's," which may lead to a stronger labelling effect (Milkman, Rogers, & Bazerman, 2016).

In three studies, we demonstrate that FOP "Healthy Stars" labels improve consumers' choices. The Healthy Stars label was developed by the researchers and is based on the Guiding Stars nutritional labelling system. The Healthy Stars label rates foods from 0 (*not healthy*) to 3 (*very healthy*) stars. Studies 1 and 2 demonstrate the effect of Healthy Stars in a limited experimental setting. Study 3 expands the findings using an open-source online grocery store.

Study 1

Methods

Participants (N=191) imagined shopping for cereals for themselves. Participants were shown an array of 12 cereals of varying health levels (three of each star level). Depending on condition, the cereals were labelled with Healthy Stars or not. Price and nutrition information were not shown to participants. Participants chose one cereal, and then were asked a series of questions about the chosen cereal, a healthy cereal from the set, and an unhealthy cereal from the set. The questions pertained to perceived healthiness, anticipated tastiness, and anticipated emotions. Results from the questions are not discussed here.

Results and Discussion

Participants who saw Healthy Stars labels chose cereals with a higher star rating on average (*M*=1.81) than participants who did not see healthy stars labels (*M*=1.11), p <.001. However, participants made this decision in the absence of nutritional information. We ran Study 2 to determine if the effects would persist when nutrition labelling was also available for the cereals. In Study 2, we also tested whether FOP labels would be more effective for some consumers over others. Namely, we tested whether BMI, time affluence, education, numeracy, and dietary confidence moderated the effect of labels on choice.

Study 2

Methods

Participants (*N*=350) participated in a 2 (Healthy Stars: displayed, absent) X 2 (nutrition facts label: available, unavailable). Namely, participants saw the same array of 12 cereals used in Study 1. The only change was that some participants were able to click a button below the cereal to see the relevant nutrition information. Participants competed the same measures as Study 1 in addition to BMI, education level, time affluence, numeracy, and dietary confidence.

Results and Discussion

A 2(Stars) X 2(Nutrition Facts) ANOVA on choice revealed a main effect of Stars and no other effects. Participants who saw the Healthy Stars labels chose cereals with a higher star rating on average (*M*=2.03) than participants who did not (*M*=1.19), *p*<.001. This effect was not moderated by BMI, numeracy, or diet confidence. The effect was stronger for time affluent participants (vs. time poor participants; *p*=.08) and college educated (vs. not college educated) participants (*p*=.02).

Study 3

Although promising, our effects have thus far been limited to a small subset of items in a highly controlled experiment. For Study 3, we developed an open-source researcher-controlled online grocery store (www.openscience-onlinegrocery.com). The store contains over 10,000 products. Participants use the store like they would use a commercial online grocery store (e.g., peapod, Instacart), except that no transaction takes place. Researchers are able to monitor which products consumers examine, add to cart, and check out with. Researchers can also make modifications to the way products are labelled, categorized, and ordered. For Study 3, we created two versions of the store: one with star labels and one without.

Methods

Participants (*N*=156) were asked to imagine shopping for two days for themselves. After receiving a primer on the store, participants were directed into a version of the store with or without stars. The primary dependent variable is what products participants checked out with.

Results

The average star rating of the foods in participants' carts was not significantly higher in the stars (*M*=1.48) versus control condition (*M*=1.36). However, controlling for the number of items purchased, people in the Stars condition purchased significantly more three-star items (*M* = 4.05) and fewer one-star items (*M*=.46) than participants in the control condition (*M*$_{3star}$=3.00; *M*$_{1star}$=1.15), both *p*s<.01. Controlling for total number of items purchased, people in the stars condition also bought more products from the Produce category (*M*=2.86) than participants in the control condition (*M*=2.36),

p=.051, but this did not mediate the effect of labels on number of three-star items purchased.

Conclusion

An increasing number of consumers grocery shop online (Daniels, 2017). While online shopping, consumers may be more receptive to health labels (Degeratu et al., 2000; Milkman et al., 2016). In three studies, we present evidence that consumers make healthier choices when provided with FOP labels in an online context. This occurs regardless of whether nutrition facts labels are presented alongside FOP labels. It is unclear why FOP labels outperform nutrition information. Ongoing research will probe this finding. We also introduce a new tool for studying how consumers behave while shopping online.

How Do Nutrition Promotions Impact Shoppers' Sensitivity to Price Promotions?

EXTENDED ABSTRACT

Grocery retailers play a key role in the fight against the obesity epidemic by offering diverse health and wellness programs at the point of sale. Consumers trust food retailers to support their health more than ever before and even evaluate food retailers based on how well they support their goal of eating healthy (FMI, 2018). While prior research has contributed significant insights into the success of such programs in promoting healthy choices among consumers (Nikolova & Inman, 2015; Newman et al., 2018), their impact on retailers' sales is still not fully understood. This is precisely the objective of our research to examine how consumer reaction to nutritional information in retailer promotions impact sales.

While retailers provide shoppers with simplified nutritional information in a variety of forms (color coding, nutrition scores), we focus on the use of NuVal scores, ranging from 1 to 100 with higher scores signifying healthier products. Prior research has examined how the introduction of the NuVal scoring system impacts shoppers' purchases (Nikolova & Inman, 2015). In contrast, our research examines consumer responses after the nutrition scoring system has been in place for a while and its novelty has worn off. Specifically, we look at the impact of featuring the NuVal scoring system in the weekly promotion flyers.

We use frequent shopper purchase data of 4,081 shoppers across a thirty-month period combined with promotional data from the grocery chain's weekly circulars to measure consumer response. That is, we assess the effect on sales resulting from the display of nutrition promotions in addition to price promotions in the weekly circular. We define nutrition promotions as the display of a summary nutritional score (NuVal score) next to a product featured in the weekly circular. Price promotions are defined as the display of discounted prices featured in the circular. We examine if shoppers' price promotion sensitivity is affected by heightening the salience of nutritional information via featuring nutrition promotions in the circular. Importantly, we examine the moderating effects of shopper characteristics (nutrition consciousness and share-of-wallet) on these nutrition and price promotion sensitivities.

One additional distinguishing aspect of our work is the examination of the impact at the category-level (rather than product-specific) price and nutrition promotions. That is, we assess the effect of a price promotion or a nutrition promotion for apples (NuVal score=96) in the circular on the sales for all products in the produce category (not just the sales of apples). We predict that price promotions will have a significant positive impact on category-level sales (H1), because they will increase shoppers' attention to the category even though

they might decrease attention and search in other categories (Fong et al. 2016; Tam and Ho 2006). Importantly, we predict that featuring nutrition promotions in the category in addition to the price promotions will lead to an additional increase in sales sales (H2). In addition to bringing further attention to the category, nutrition promotions should also lead to more favorable evaluations of the category because research has shown positive associations between nutrition claims and favorability of product evaluations and purchase intentions (Andrews et al., 1998; Berry et al., 2017; Burton et al., 1999; Keller et al., 1997; Kozup et al., 2003). We further predict that the effect of nutrition promotions on sales will be stronger for shoppers with higher nutrition consciousness (H3), since such shoppers react more positively to the provision of nutrition information at the point-of-sale (Andrews et al., 2011). Finally, we hypothesize that the effect of price promotions on sales will be stronger for shoppers with higher retailer's share-of-wallet (higher grocery expenditures at the store; H4) because heavy users exhibit greater deal-proneness (Hackleman & Duker, 1980). The effect of nutrition promotions on sales will be weaker for shoppers with higher share-of-wallet (H5), because the featured nutritional information will be less novel for heavy users.

We test our hypotheses using the purchases of 4,081 shoppers in four categories (meat, produce, seafood, and bakery) across a thirty-month period. First, to test of H1 and H2, we conducted a multiple regression in which the total weekly category sales were predicted by the availability of price promotion and nutrition promotion in the circular (both coded as 1=yes; 0=no), three category dummy variables to capture differences in sales across the categories, and a trend variable (week number) to account for seasonality. Results (Table 1) support H1 and H2, showing that price promotions (b=5137.08, $p<.0001$) and nutrition promotions in the circulars (b=4088.04, $p<.0001$) increases total category sales. It is worth noting that the magnitude of the two effects is similar; simply adding nutritional information in the circulars leads to an additional increase in category sales of $4,088 per week on average.

Next, we looked at the disaggregated transaction-level data (3.5 million transactions) and conducted a similar regression on the total sales per transaction. Results (Table 2) were substantively similar: the effect of price (b=.154, $p=.01$) and nutrition promotions were both positive and significant (b=.132, $p=.01$), supporting H1 and H2.

To assess the moderating effect of shopper's nutrition consciousness, we calculated the average quantity-weighted NuVal score of each shopper's purchases across the 30-month period In support of H3, we find that the increase in category sales resulting from the display of the nutrition promotions in the weekly circular is stronger among highly nutrition conscious shoppers (b=.002, $p<.0001$). Interestingly, we also find a significant negative nutrition consciousness x price promotion interaction (b=-.007, $p< 0.0001$), suggesting that highly nutrition conscious shoppers react more negatively to price promotions but more positively when such promotions are accompanied by nutritional information.

To examine the moderating effect of shopper's share-of-wallet, we calculated each shopper's average monthly total basket purchases at the store. H4 and H5 are supported: Shoppers with higher share-of-wallet react more positively to price promotion (b = .062, $p <0.001$) and negatively to nutrition promotions (b= -.037, $p<0.001$).

Planned follow-up experiments will examine the mechanisms underlying these effects and test ways in which the effectiveness of nutrition promotions can be strengthened among shoppers with lower nutrition consciousness and higher share-of-wallet.

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Understanding Co-Creation:
Re-examining Value and Experience in Consumer Research

Chairs: D. Matthew Godfrey, University of Massachusetts Amherst, USA
Nathan B. Warren, University of Oregon, USA

Paper #1: Co-Creating Neighborhood Brands

Meredith Rhoads Thomas, Florida State University, USA
Alex Mitchell, California State Polytechnic University, Pomona, USA

Paper #2: Trickster Consumers: Consumed by Passion

Nathan B. Warren, University of Oregon, USA
Linda L. Price, University of Oregon, USA

Paper #3: Value in Heterogeneity: How Servicescape Experiences Emerge From Divergent Consumption Practices

D. Matthew Godfrey, University of Massachusetts Amherst, USA
Melanie Wallendorf, University of Arizona, USA

Paper #4: Understanding Co-Creation Through a Playbour Lens

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Peter A. Dacin, Queen's University, Canada

SESSION OVERVIEW

This session examines and expands concepts central to the study of co-creation in consumer research. Over the past two decades, co-creation has emerged from a call for customer involvement in product and service development (Prahalad and Ramaswamy 2000) to a philosophy that influences business practices across diverse industries and marketing processes. However, marketing and consumer research must move beyond conventional theorizations to develop new and more nuanced explanations of the social and material processes of value co-creation (Humphreys and Grayson 2008; Cova, Dalli, and Zwick 2011; Ostrom et al. 2015).

Vargo and Lusch (2004, 2016) argue that consumer value is always co-created, since it is realized only in use, or consumption, rather than in production. This concept of value-in-use aligns with a more holistic, culturally-oriented understanding of co-creation processes than theories emphasizing utility and value-in-exchange (Holbrook 1998; Arnould 2005; Schau, Muñiz, and Arnould 2009). The papers in this session review and extend the collective wisdom offered by sociocultural theories of value co-creation and probe more deeply into the theoretical issues surrounding the co-creation of consumer value and customer experience. The authors examine phenomena that challenge conventional co-creation theory and enable richer theorizations of value-in-use and consumer experience. Through a diverse range of study contexts, the session asks two interrelated questions. First, what is the nature of co-created value? Second, following the assertion that all value is necessarily co-created (Vargo and Lusch 2016), what social and material relationships explain consumer experiences in an increasingly participatory and consumer-centric (Firat and Venkatesh 1995) market environment?

The first two papers examine how consumer mythologies are co-created through social and material interactions that occur within and on the fringes of the market. Thomas and Mitchell study the co-creation of neighborhood brands, tracing the evolution of brand mythologies over time through interactions between marketers and consumers. Warren and Price analyze the processes by which consumers create and sustain value in wilderness experiences by aligning with the market-dissociated "dirtbag" mythology and co-opting market

resources. The final two papers extend theories of value-in-use, by examining competition and complementarity between consumer activities in co-created consumer experiences. Godfrey and Wallendorf study value in retail servicescapes as a consumer experience that emerges from heterogeneous consumption practices overlapping in time and space. Grant and Dacin develop the concept of "playbour" to explain the process by which value emerges through consumer experiences of competitive play and labour on the co-production platform Threadless.

Taken together, these papers develop conceptual conversations that are needed to more fully understand consumer value and customer experiences, which will become increasingly relevant and important as the conventional lines separating production and consumption continue to blur.

Co-creating Neighborhood Brands

EXTENDED ABSTRACT

Storytelling is critical to understanding how a cultural brand is co-created through marketer-consumer dynamics (Fournier 1998; Holt 2002, 2004; Holt and Thompson 2004; Schouten and McAlexander 1995). Consistent with notions of value created through market interactions (Vargo and Lusch 2008), cultural branding theory asserts that brands themselves come into existence to the extent that they are woven into stories 'authored' by market actors (Holt 2004). For example, consumers act as authors as they ritually draw on brands to resolve identity burdens generated by contradictory desires (Holt and Thompson 2004; Thompson and Tambyah 1999). Alternatively, marketers act as storytellers when they weave together culturally resonant notions of place to situate brands and market offerings (Cayla and Eckhardt 2008; Peñaloza 2000; Thompson and Tian 2008). In this sense, a cultural brand is an evolving story continually re-worked by both marketers and consumers in keeping with their respective needs.

While offering a powerful explanatory framework, certain assumptions of the cultural branding paradigm fall short in explaining ways in which particular cultural brands are co-created and co-produced in the marketplace. First, the cultural branding paradigm suggests an active role for marketers, consistent with previous literature on co-creation of brands, through developing "value-adding activities and experiences for the customer" (Payne et. al. 2009). In this way, the brand is co-created through marketer efforts to create a setting for optimal consumer experiences (Prahalad 2004). Cultural branding adds to this view by focusing on how marketers construct brand stories that perform identity myths that consumers can use to resolve anxieties over social contradictions (Holt and Thompson 2004; Luedicke, Thompson, and Giesler 2010; Thompson and Tian 2008). However, we have little work examining how cultural brands are co-created and maintained over time when marketers cease to be engaged in managing mythic storytelling and controlling a brands message (Muñiz Jr. and Schau 2005).

Second, while cultural branding proponents suggest a paradigmatic move away from the tenets of liberatory postmodernism (Holt 2002), cultural branding still largely assumes a degree of freedom on the part of consumers to appease divergent aspects of their fragmented identities through available options in the marketplace (Firat and

Venkatesh 1995). However, certain forms of consumption, while derived from identity concerns, are constrained in terms of consumers' ability to engage in storytelling to access disparate identity myths (Askegaard and Linnet 2011; Giesler and Veresiu 2014; Zwick, Bonsu, and Darmody 2008). Recent work in the area of branded places suggests that physical and spatial dimensions of a brand may contribute to this constraint (Castilhos 2019), as do collective framing influences from a wide array of stakeholders (Arvidsson and Caliandro 2016; Kates 2004).

Through an exploratory ethnographic investigation of two planned neighborhood developments. we seek to extend and enrich the cultural branding theory by helping to explain the multifaceted ways in which the central mythologies of cultural brands are co-created amongst a diverse array of stakeholders. We also analyze the maintenance and evolution of the neighborhood brands as the central storytelling, brand managing role shifts gradually over time from the neighborhood developer (the marketer) to the neighborhood residents (the consumers). Our data collection is ongoing and includes a combination of depth interviews, observational techniques, photography, and text sources including news articles, marketing materials and government documents. To date, 40 semi-structured interviews have been conducted with the developers and residents of two planned neighborhoods, in the Midwest and Southeastern United States.

Our preliminary analysis shows that mythic storytelling plays a key role throughout the development of a neighborhood in selling the lived experience to consumers. The multiple stakeholders in this context create both challenges and opportunities for the marketer as they work to establish the brand identity, which is gradually handed over to the homeowners as the individual houses are sold. This storytelling is managed primarily by the developer and passed down to real estate agents, who must convey that meaning to prospective homeowners. In both neighborhoods, these brand myths are influenced and shaped by local histories, in an effort to preserve cultural meaning the land held before physical construction began.

This type of marketer-consumer relationship is unique in that the transfer of ownership and the co-production dynamics of the brand meaning shift slowly over time, until the marketer no longer has any control over the brand. However, in cases where the developer is building their own firm's brand as they pursue other properties, the outcome of the neighborhood continues to influence their reputation long after they have left the neighborhood. Therefore, it is in their interest to develop a strong cultural brand that will extend beyond their presence in the development.

We find that as residents become the purveyors of brand meaning, they work within the given brand framework, but incorporate meaning from their own experiences in the neighborhood and their individual beliefs about neighboring and community. As they assume control over the brand, residents build upon or depart from the original narrative to make sense of outcomes in the neighborhood, relative to their expectations. For example, some residents reconstruct the cultural myths to alleviate contradictions between the brand and a lack of fit with the local culture.

Additionally, our data reveals that local officials, businesspeople, and interested citizens influence brand meaning by presenting counter-narratives regarding the neighborhood development. Motivations for resistance include concerns about environmental damage, respecting local traditions or culture, and possible increases in traffic or crime. As the brand narratives are tested by these outside actors, marketers are challenged to more clearly convey cultural legitimacy of the neighborhood brand and demonstrate its congruity with the existing culture.

We contribute to a more nuanced understanding of how cultural brands are collaboratively co-created through interactions amongst a diverse array of market stakeholders. In this research, neighborhood marketers, resident consumers, and external stakeholders co-create the neighborhood brand by co-authoring cultural narratives based in local history, images portraying the "good life" (Holt 2004), and residents' own ideas of what neighboring and community involve.

Trickster Consumers: Consumed by Passion

EXTENDED ABSTRACT

Marketplace mythologies help consumers advance their identity projects by resolving conflicts and contradictions (Arsel and Thompson 2011; Brown, McDonagh, and Shultz 2013; Holt 2004; Luedicke, Thompson, and Giesler 2010; Muniz Jr. and Schau 2005; Thompson 2004). These mythologies are integral to the co-creation of cultural brands and consumer value (Grönroos and Voima 2013; Holt 2002; Holt and Thompson 2004; Vargo and Lusch 2004, 2016).

We examine a field of consumers who use marketplace mythology to address the conflict between their pursuits-of-passions and presumed market rewards. Consistent with neoliberal ideologies, numerous career guides, as well as successful business people, entrepreneurs, scholars, artists, and athletes, encourage pursuits-of-passions as the pathway to marketplace rewards (Hong 2015; Taylor 2015). However, the consumers we focus on align themselves with the 'dirtbag' marketplace mythology, which celebrates wilderness pursuits-of-passions, without regard for marketplace rewards (Chouinard [2005] 2016; Holt and Cameron 2010). Examining the dirtbag mythology through the theoretical lens of the archetypical trickster is uniquely useful in understanding how consumers reinterpret, convert and invert marketplace resources in order to resolve tensions between their passion-driven identities and their subsequent dissociation from markets. While the trickster's pursuits-of-passions occur without regard for society, the inevitable conflicts between the trickster's individualism and society's structures lead to destructive and rejuvinative disruptions. These disruptions are temporarily resolved as society creates new structures in response to the trickster, causing a recurrent co-creative cycle.

Previous research describing the power of mythologies in co-creative cultural branding has overlooked the trickster archetype, instead focusing on heroes, outlaws, and rebels (Belk and Costa 1998; Holt and Thompson 2004; Kozinets and Handelman 2004; Luedicke et al. 2010; Schouten and McAlexander 1995). Theoretically, we contribute to research on marketplace mythologies by introducing the trickster archetype as a cultural resource for resolving contradictions between individualistic passions and marketplace rewards. Distinct from the gift-bearing hero, the oppositional rebel and the outlaw seeking escape from society, the trickster is not primarily defined by his relationship to society. The archetypical trickster is primarily defined by uninhibited pursuits-of-passions, and secondarily by the tricks he plays on society. These tricks enable the trickster's pursuits-of-passions, allow the trickster to live inbetween society and the wild, and lead to unintentional disruptions of the social system (Babcock-Abrahams 1975; Carroll 1984; Hyde [1998] 2010). The trickster consumer reimagines market relationships and exploits market resources in order to survive and thrive inbetween markets and the wild. Figure 1 models the Trickster's disruptive and co-creative market impact.

Managerially, the trickster archetype is an important co-creative cultural resource for brands, especially in the $412b consumption field of outdoor recreation (Bureau of Economic Analysis 2018). Prominent outdoor brands rely on "core consumers," who align

themselves with the trickster/dirtbag marketplace mythology, for their branding, personnel and product development (Chouinard [2005] 2016, 92; Harrison and Corley 2011; Holt and Cameron 2010). For example, early mountain bikers, who self-identify as dirtbags, inadvertently co-created the modern mountain bike industry. They built secret illegal trails on federal, state and private land. As trails improved, demand for bikes and trail access increased, leading to the co-creation of new industries, including the economic revival of rural communities and the development of online mapping platforms (Evans-Brown and Quimby 2019). Similar to the trickster's role as accidental culture-creators, dirtbag consumers are accidental co-creators of the booming outdoor industry.

This project uses a broad range of ethnographic data to understand wilderness consumers who self-identify with the term "dirtbag." The data includes seventeen semi-structured interviews, follow-up communications, nine informal interviews conducted at the "Dirtbag Derby" climbing competition, ethnographic field notes, and netnographic data from social media platforms. Secondary sources were used to better understand how the emic data fit into popular narratives of "dirtbags," wilderness consumption, and outdoor brands. These sources, often sponsored by outdoor brands, include popular press, documentary films (e.g., *Dirtbag: The Legend of Fred Beckey,* O'Leske 2017), blogs and many episodes of *The Dirtbag Diaries* podcast.

Findings reveal that certain consumers assuage the conflict between their individualistic wilderness passions and lack of marketplace reward by embracing the dirtbag marketplace mythology. These consumers report their pursuits-of-passions to be the singular motivation for their interactions, and lack of interactions, with markets. They consider market structures—such as shelter, food, family, and cleanliness—secondary considerations to be freely reimagined, redefined, and repurposed, in order to further their pursuits-of-passions. Lolo (36F), a brand-sponsored snowboarder and proud self-identified dirtbag, boasts of "evicting" her child (now eight years old) from her womb before winter so she could go "shred" on her snowboard. Every winter, she moves into a van that she illegally parks in ski-resort parking lots, 1,000 miles from her husband and son. She reports that her fellow snowboarders and her husband support her decisions. Reimagining the meaning of clean and dirt, Dusty (22F) describes rubbing sand through her hair to get rid of the grease accumulated after a week climbing in the desert.

Disassociating from markets and playing tricks on market structures enables our informants to live indefinitely inbetween markets and the wild, and ultimately causes marketplace disruptions and the co-creation of new market structures. Trinity's (43F) ambivalence to market structures is expressed in her strong desire to own a home, while simultaneously feeling imprisoned when she sleeps under a roof, even in her own bedroom. Her belief that the "real world" is the wilderness, and her recurrent need to work in a "front country" office to sustain her wilderness pursuits, further emphasizes her indefinite inbetweenness. Other informants disruptively redefined home, defining home as living in cars, tents or sleeping on dirt. Ethan (20M) describes living in his car near a river using the metaphor of a two-story home. He believes that dirtbags have influenced mainstream market actors, who have adopted the hashtag #vanlife, which has 4.6m posts on Instagram. #Vanlife celebrates the aesthetic, experiential, and material value co-created by consumers and producers in the booming van-dwelling marketplace.

We find that trickster consumers disruptively co-opt market resources to produce personally valuable experiences. This causes co-creative cycles of value creation, iterating between consumers and producers.

Value in Heterogeneity: How Servicescape Experiences Emerge From Divergent Consumption Practices

EXTENDED ABSTRACT

A growing body of theory reconceptualizes value as a sociocultural construct, rather than an economic output. Instead of being something produced for consumers, "value is idiosyncratic, experiential, contextual, and meaning laden" (Vargo and Lusch 2008, 7), and is realized during use or consumption as "an interactive relativistic preference experience" (Holbrook 1998, 5). Theorizing consumer value as a sociocultural construct enables more holistic explanations of many consumption phenomena, including consumer experiences in physical spaces. In this paper, we build a spatial theory of value co-creation by studying consumer experiences in a servicescape that facilitates overlapping and heterogeneous consumption practices.

Value is "a function of the interaction between subjects, or between a subject, and an object… and resides in the consumption experience" (Echeverri and Skålén 2011, 353). As such, value is experienced individually, and in both negative and positive ways, as consumers interact with multiple actors involved in the provision (or destruction) of a service (Tax, McCutcheon, and Wilkinson 2013). Thus, the creation of consumer value always arises during the enactment of consumption practices (Grönroos and Voima 2013). Shove et al. (2012, 133) also argue that "places are defined by practices," which are routinized patterns of human activity organized around interactions between cultural and material resources (Schatzki 2001, 2002; Reckwitz 2002). Theories of practice acknowledge and examine the co-constitutive nature of human action and the external social and material structures that facilitate that action (Warde 2005).

Practice-oriented thinking calls for a novel practice-based examination and conceptualization of value within the physical market environment, or servicescape. Research examining consumer experiences within servicescapes typically focuses on the facilitation of a single overarching consumption practice (Arnould and Price 1993; Dion and Borraz 2017) or a set of practices guided by an overarching cultural logic (Kozinets et al. 2004; Thompson and Arsel 2004; Borghini et al. 2009). However, as market spaces break from standardized services and layouts (Aubert-Gamet and Cova 1999), consumption practice heterogeneity plays an increasingly important role in servicescape theory and management. For example, the practices of work or study at coffee shop tables reduces the positive value experienced by consumers enacting different consumption practices (Griffiths and Gilly 2012), and the practice of walking with a stroller can disrupt the schedule and routines of service providers and other consumers riding a crowded tram (Echeverri and Skålén 2011). In other words, certain configurations of practices in a servicescape may facilitate the co-creation of positive value for some consumers, while inducing negative value to emerge for others.

In this paper, we examine the ways that value is co-created through interactions between the places, things, and people—including consumers and service providers—involved in the enactment of heterogeneous practices within a servicescape. We use ethnographic and spatial survey methodologies to look more closely at the lived experience of consumers within a space that facilitates heterogeneous consumption practices, including the cultural and material resources the practices draw upon.

Our analysis is based on four years of participant observation at a mixed-use retail center in U.S. Southwest, and also includes an open-ended "sketch map" survey (Brennan-Horley and Gibson 2009; Boschmann and Cubbon 2014)and governmental spheres of planning and economic development policy. In response we discuss here how qualitative methods can be used to address such concerns,

based on experiences from an empirical project charged with the task of documenting creative activity in Darwin - a small city in Australia's tropical north. Diverse creative practitioners were interviewed about their interactions with the city - and hard-copy maps were used as anchoring devices around spatially orientated interview questions. Results from this interviewˇ - ˇmapping process were accumulated and analysed in a geographical information system (GIS. These sketch maps extend the reach of our ethnographic data by "collecting unique spatial data of individual experiences, visualizing socio-spatial processes, [and] breaking down particular barriers of positionality in research" (Boschmann and Cubbon 2014, 237). The study site, a small retail center located in a gentrifying urban neighborhood, blends together free concerts, bakeries favored by working-class neighborhood residents, and a low-income-focused farmers' market with posh boutiques and upscale restaurants. This unique mix provides ideal conditions for studying the ways that heterogeneous practices shape consumer experiences within a servicescape. Ethnographic data include field notes, photographs, and formal and informal interviews with consumers, managers, and service providers. Additionally, eighty-three consumers participated in the sketch map survey, allowing us to use GIS software to analyze the spatial relationships between the locations of multiple practice enactments and the experiences consumer had enacting their own practices.

We find that the overlapping enactment of heterogeneous consumption practices can have both positive and negative influences on consumer experiences. The value experienced by consumers enacting practices within the servicescape is shaped by the alignment of material and cultural resources used by overlapping practices. Conflict over material resources shared by multiple practices, such as space, furniture, or retail products, is a necessary condition for the emergence of both positive value (between complementary practices) and negative value (between conflicting practices) in consumer experiences. The complementarity of consumption practices depends on alignments of cultural resources deployed by consumers enacting these practices. Practices enacted following a market logic, such as holding business meetings or shopping for produce, exert a negative influence on the value experienced by consumers enacting practices that share material resources but follow non-market logics. Practices guided by non-market logics have a similar effect on market-oriented practices, such as dogs barking while walked by their owners between consumers eating at restaurant tables. Consumer sketch maps indicate that practice complementarity plays a prominent role in shaping consumer experiences.

Our results illustrate that value co-creation in the servicescape is a process outside the direct control of service providers and managers, who must exert their influence indirectly by facilitating specific practice configurations through servicescape design. These designs, however, are always open to interpretation by consumers who use market spaces in unanticipated ways, creating both serendipitous complementarities and unpredictable conflicts as they enact heterogeneous consumption practices. Our analysis contributes a more holistic understanding of the sociocultural factors that shape consumer servicescape experiences. The sketch map method also demonstrates an explicitly spatial analysis of the links between consumption practices and consumer experience.

Understanding Co-Creation Through a Playbour Lens

EXTENDED ABSTRACT

The notions of play and of labour were often thought of as contradictory and distinct (c.f., Marx 1909). However, a more recent perspective, the Californian Ideology (Barbrook and Cameron 1996),

emphasizes that we live in a new economy where the conflict between labour and capital is melding, and in which playfulness is emerging within the labour of a creative class. In the past decade, companies began creating online co-creation platforms engaging consumers in a playful manner through such activities as design competitions (e.g., Lego Ideas, Doritos Crash the Superbowl, Threadless). Further, the increasing digitialization of labour processes has also brought with it increased playfulness, and gamification in cultural practices and work activities (Ferrer-Conill 2018; Khaled 2014; Raessens 2006) as well as literature extoling the benefits of gameful and playful experiences in the workplace (Torhonen et al. 2019).

One area in which marketers are witnessing this melding is co-creation. For some, co-creation empowers consumers to construct and shape their own consumption experiences, and provides them opportunities to connect and share experiences with like-minded others in a community (Prahalad and Ramaswamy 2004; Vargo and Lusch 2004), democratizing the marketplace with consumers who are "empowered, consulted, knowledgeable and liberated" (Parsons, Maclaran, Chatzidakis 2017, p. 6). For others, co-creation is an exploitative relationship between firms and consumers (Cova and Dalli 2009), characterized by unpaid labour and constituting forms of control and exploitation (Cova, Dalli, and Zwick 2011). However, as Cova et al. (2011, p. 235) note, "the creative and voluntary work of co-creation can be reduced neither to passive consumerism nor to the insidious manipulation of capitalists," suggesting the melding of perspectives is necessary for characterizing co-creation. In our research, we adopt and apply such a theoretical lens in examining an online co-creation platform.

Stemming from the Californian Ideology, our theoretical lens draws upon the concept of "playbour" (Kucklich 2005)—a hybrid concept derived from play and labour describing a type of unpaid labour that gives the perception that it is a leisure activity, or an extension of play (Kucklich 2005). Playbour is useful in "describing the convergence of mechanisms that drive fans to engage in play that is highly profitable for the entertainment industries, yet is seldom remunerated" (Goggin 2011, p. 358). In the digital gaming realm, researchers use the concept to examine the common occurrence of individuals expending extensive time and labour in creating computer game modules and extensions (Goggin 2011; Torhonen et al. 2019).

Understanding playbour relies on understanding the concepts of play and labour, and their relationship. Huizinga (1938/1955) defines play as intense and absorbing, transcending the immediate needs of life, having to do with the imagination, and being joyful because it provides a hiatus from the seriousness of daily life. For some researchers, play must occur naturally and cannot be forced (Ferrer-Conill 2018), thus, "a game which one would be forced to play would at once cease being play" (Caillois 1961, p. 195). Based on this perspective, scholars have long established play as a form of escapism and self-distraction from the burden of labouring processes (Marcuse 1933/1973). Play has "no material interest, and no profit can be gained by it," hence it is autotelic (Huizinga 1938/1955, p. 13). Labour, by contrast, revolves around an agreement between an employer and employee to generate value though productive processes (Thompson 1989). With organizational goals at the core of labour, scholars argue that labour can hardly nurture genuine playful attitudes (Ferrer-Conill 2018).

Yet, the confluence of technological advances in online marketing strategies, along with the digitization of the labour process, has given way to an environment in which playfulness is adopted within the tools of digital labour (Ferrer-Conill 2018). The historical dichotomous understanding of the theoretical understanding of play and labour seem much less binary in practice. The concept of playbour

(Kucklich 2005) as a theoretical lens emerges as a way to conceptualize of the relationship between consumers and firms in the context of an online co-creation platform where play and labour co-exist. In this lens, the fusion of play and labour articulates redefined cultural and social connections (Ferrer-Conill 2018) between consumers and firms to unpack broader developments in an evolving understanding of capitalism (Cova et al. 2011).

Our data consist of a netnography and depth interviews with members of an online co-creation community formed around Threadless, a community-based company depending entirely on the participation of members to create designs to print and sell on Threadless products.

Two themes emerge in our preliminary findings that characterize co-creation through the playbour lens. First, we find that play is an important and expected element in consumers' motivation to participate. Our informants note spending countless hours engaged in creating designs. For most informants, who tend to be university educated with professional careers and young families, engaging in this co-creation community provides an escape from their hectic lives. Losing themselves in the creation to exist in the moment are foundational characteristics of play (Gadamer 1975). In this way, engaging with the community provides value in-use to participating consumers (Vargo and Lusch 2004).

Second, we observe that play maintains consumers' motivation to participate despite sometimes feeling frustrated toward the firm and even couching these frustrations in exploitive language. Based on informants' reports, although Threadless has explicit rules for the competition, it is through understanding the competition's nuances and implicit rules that participating consumers are successful at the competition. In the end, while the competition is a primary source for value creation for the firm, it is also a catalyst for consumers to create and derive value in playfully engaging with the community to better understand the competition's nuances.

Our work enlightens the relationship between play and labour in an online co-creation community. We find that play is an important mechanism in successful value creation, which propels and maintains the elements of labour inherent in the co-creation platform.

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Reconsidering the Formation and Consequences of Injustice in the Marketplace

Chair: Broderick Turner, Northwestern University, USA

Paper #1: (Trans)Women Are Wonderful?
 Broderick Turner, Northwestern University, USA
 Galen V. Bodenhausen, Northwestern University, USA

Paper #2: An Increase in Interracial Marriage Increases Racial Bias
 Allison Skinner, Northeastern University, USA
 James Rae, University of Massachusetts, USA

Paper #3: Reach Out in the Darkness: How Unfair Treatments Shape Social Connection Motivation
 Yijie Wang, Hong Kong Polytechic University, China
 Yuwei Jiang, Hong Kong Polytechic University, China
 Mandy Mantian Hu, Chinese University of Hong Kong, China
 Ninghua Zhong, Tongji University, China

Paper #4: Perceptions of Your #MeToo Post: Men and Women See it Differently
 Wendy De La Rosa, Stanford University, USA
 Solene Delecourt, Stanford University, USA
 Odyssia Ng, Stanford University, USA

SESSION OVERVIEW

Consumers must contend with societal injustice towards their identity, (i.e., their race and gender), and their actions (choice of romantic partner). In this session, we provide novel research from four papers that explore the processes that lead to societal injustice (Papers 1 and 2), how experiencing injustice shifts consumers' behavior (Paper 3), and how disclosing yourself as the victim of sexual injustice changes the perception of other consumers about one's experience (Paper 4). By examining both the psychological processes that lead to those outcomes and the corresponding behavioral outcomes, this session can open new avenues for research on consumer injustice.

Paper 1 explores an explanation for the mistreatment of transgender individuals, and finds that the difficulty in transitioning from male to female (vs. female to male) leads to a deviation in the evaluation of transgender faces, such that transgender women are judged more harshly than CIS gender women, or transgender men, but similar to CIS gender men. It is the first paper in to use a visual scale to unearth this difference in gender identity evaluations.

In, connecting societal changes to injustice, Paper 2 finds that perceptions of an increasingly diverse America, through the rise of interracial marriage actually increases racial bias. Paper 3 finds that consumers who are victims of injustice exhibit a higher need to belong and exert more effort to connect with acquaintances and strangers than fairly treated peers.

Finally, Paper 4 explores the perception of self-disclosure of the injustice of sexual assault and explores how this admission interacts with the gender of the perceiver. Their research finds a divergent pattern in response to the self-disclosure of a victim, such that women give less money to victims (as compared to a control), while men give more.

In concert, these four papers highlight the importance of examining the psychology underlying how antecedents that lead to injustice, while also exploring the effect of injustice on consumers. This session not only provides novel theoretical insights, but also has critical practical importance. We hope that this session will have a broad appeal to researchers studying injustice in its many forms.

(Trans)Women are wonderful?

EXTENDED ABSTRACT

Transgendered individuals experience both increased acceptance and dangerous discrimination. There are positive global shifts in the attitudes towards transgendered individuals such as a recent global, in which the majority of respondents believed in banning discrimination against transgender people(Flores, Brown and Park 2016). However, transgendered individuals report experiencing significant discrimination (Harrison et al. 2012). Indeed, work using a modified version of the implicit association test for attitudes towards transgendered people (IAT; Wang-Jones et al. 2017) found that people may express an explicit acceptance of transgendered people, but still hold a negative implicit attitude towards this group. A glaring omission in the work on transgender evaluations is the consideration of the direction of the transition, i.e. do attitudes towards transgender individuals depend upon the direction of transition such that individuals identified as male-to-female (MTF) or female-to-male transgender respondents (FTM), may be evaluated differently?

Early work on gender and judgements established women are evaluated more positively than men. With this finding, known as the "women are wonderful" effect (Eagly and Mladinic 1989), researchers have determined that women are judged to be more warm and trustworthy than men. Work on gender categorization also finds that the binary gender categorization is one of the first social categorizations, along with age and race, that people are able to make (Maccoby 1988). An observer can accurately assess whether a person is male or female, even when a person's hair and eyes are concealed (Bruce et al. 1993). This ease of categorization is due to a strong difference in the prototypical features that make up a face. Adult male and female face are defined prototypical features for males include lowered eye-brows ridges, greater facial angularity, proturbent noses, and prominent chins, whereas women have higher eye-brow ridges, lighter skin texture, rounder faces and non-prominent chins (Bruce et al. 1993; Bruce and Young 1998).

However, for transgender individuals who transition from male to female, the male prototypical features are more difficult to reverse (Ettner, Monstrey, and Coleman 2016). However, in the transition from female to male, the male prototypic features can be induced by hormone replacement such that a FTM who is fully transitioned loses many of the female facial features and is able to gain some of prototypic male features. A MTF may be able to gain many of the non-facial female prototypic features (breasts, hips, longer hair), yet they continue to carry the prototypic male features in their face (Ettner, Monstrey, and Coleman 2016). Thus, we hypothesize that when categorizing MTF, people reflexively use their biological gender markers, and judge them the same as CIS gendered men. However, FTM do not have the same underlying biologically male facial features, but do have secondary male features, and because the male categorization is salient, these faces should be judged as more trustworthy than CIS men and FTM, but less trustworthy than CIS women faces. To test this, we developed a gender identity trust scale (GITS), which is the first scale of its kind to use visual stimuli to measure reflexive evaluations of both transgender and CIS-gendered faces.

Stimuli included 100 photographs of CIS men and women, and FTM and MTF. For transgender photos, we downloaded every 3rd profile picture for self-reported MTF and FTM in New York, California, and Texas from the website tgpersonals.com, the largest non-fee

based dating site for transgendered individuals. The same procedure was followed for CIS gendered individuals using plentyoffish.com. Unlike other work on facial categorization the images used in this study are not devoid of accessories, as it could be argued that those targets without accessories are a subset of less feminine MTF. Further, unlike other studies of facial categorization that do not use images with facial hair, this study includes those images, as facial hair growth is one of the secondary characteristics that is common among FTM in displaying their male identity it.

Participants were informed that they would make judgments about a series of pictures. From the pool of 100 human faces described in the stimuli section, participants were shown a random selection of 30 images. For each image, participants were given 2000 milliseconds to make a decision of "TRUST" or "DO NOT TRUST". If participants did not make a decision, then the item would reset for another 2000 milliseconds, until a decision was made.

We first test the following mixed effect model that regressed the GITS (as the difference between trust and do not trust judgments) on a fixed factors of for the items CIS gender (0 = No, 1 = Yes), Female Identification (0 = Identifies outwardly as Male, 1= Identifies outwardly as Female), and fixed factors for the experimental manipulation of categorization uncertainty (0 = upside down/ right side up or Human/ Not Human categorization, 1 = Male/ Female categorization) and the interaction of these four three factors. Finally, to account for individual differences in judgments within individuals, we treated each participant as a random factor.

The effect of the individual provided an intercept at 3.37, with a residual of 2.94 (AIC = 9721.38). For the scale measure, there is a main effect of CIS identification on GITS (B = 1.25, SE = .24, t(1329) = 5.15, P < 0.001), and female identification (B = 1.24, SE = .24, t(1329) = 5.12, P < 0.001). Further, there was a significant two-way interaction of the item classifications, such that being CIS gendered and female identified increased evaluation, but being trans-gendered and female identified decreased evaluations (B = 3.54, SE = .34, t(1329) = 10.82, P < 0.001). I find that CIS females are trusted the most 3.00, SD = 4.306, and they are trusted more than CIS men (.36, SD= 4.69, t (888) = 8.78, P < .001), FTM (M = 1.76, SD = 4.30, t (888) = 4.29, P < 0.001 and MTF (.32, SD = 4.57, t (888) = 9.00, P < 0.001). As a test of our hypothesis MTF were significantly less trusted than FTM (t (888) = 4.84, P < 0.001). However, there was no statistical difference in the trust of men and MTF, (t (888) = .09, P = 0.925), which provides support for our second prediction, that FTM benefit from the "women are wonderful" effect. We replicated this finding in three other studies as well. Taken together, this initial study suggests that to understand the evaluation of transgender individuals we should first understand how the transition from male to female, or female to male may shift these evaluations.

An increase in interracial marriage increases racial bias

EXTENDED ABSTRACT

Just over fifty years ago, the U.S. Supreme Court invalidated remaining state laws enforcing racial segregation in marriage and intimate relationships (*Loving v. Virginia*, 1967). Since then, interracial marriage has become increasingly common, roughly 15% of new marriages in 2010 were interracial (Wang, 2012). Further, polling data suggests that Americans are increasingly accepting of interracial marriage (Hayes, 2012). Taken together, it appears that in the U.S. interracial marriage has transformed from a criminal offense into an accepted practice in just 50 years. Despite these rapid changes in the prevalence of interracial marriage biases against interracial couples remain (Skinner & Hudac, 2017; Skinner & Rae, 2018), and little is known about how the rise in interracial marriage may impact Americans' attitudes, preferences, and identities. In this study we address how the increasing rate of interracial marriage affects White Americans' racial attitudes and openness to interracial relationships.

Although the rise in interracial marriage is often heralded as a sign of declining racial bias in the U.S. (Jones, 2011), no work has examined how changes in the prevalence of interracial romance are impacting racial biases. Previous work examining the impact of increasing racial diversity provides a pessimistic view. Sociological theory posits that increased minority proportions can threaten the majority groups' values, status, and power, thereby inciting intergroup bias among majority-group members (Blalock, 1967; Quillian, 1996; Taylor, 1998). Similarly, research shows that White Americans who live in areas with larger proportions of racial/ethnic outgroup members tend to show higher levels of racial/ethnic bias than those who live in more racially homogeneous areas (e.g., Rae, Newheiser, & Olson, 2015). Moreover, merely exposing White Americans to information about the increasing racial/ethnic diversity in the U.S. can increase racial/ethnic biases (e.g., Skinner & Cheadle, 2016; Craig & Richeson, 2014). Insofar that the increase in interracial marriages reflects a relaxation of racial boundaries and an impending increase in racial diversity (i.e., more mixed-race children), interracial marriages may pose a threat to White Americans. Thus, the increase in interracial marriage may increase racial biases among White Americans (Hypothesis 1).

We tested this hypothesis in a sample of non-Hispanic White American adults (*N* = 670) from the Project Implicit research pool. Project Implicit is an educational outreach organization that operates a website where people can complete attitude measures towards various social groups, including one that assesses Black-White racial attitudes. Each year, more than *one million people* (mostly U.S. residents) provide their Black-White racial attitudes via Project Implicit. In this study respondents were randomly assigned to read a brief news style article emphasizing the increase in interracial marriage since it was legalized or no article (control condition). The stable rates of interracial marriage article focused on a city in which interracial marriage is still fairly uncommon (i.e., Asheville, NC), emphasizing how little rates of interracial marriage have changed since it was legalized. In the other condition the article focused on a city where interracial marriage rates are among the highest in the country (i.e., Fayetteville, NC), emphasizing how much rates of interracial marriage have increased since it was legalized (see Balwit, 2017). Similar approaches have been used in previous studies to manipulate salience of increasing racial diversity (e.g., Craig & Richeson, 2014; Skinner & Cheadle, 2016). As predicted, results indicated that respondents who read about increases in interracial marriage rates showed greater implicit and explicit anti-Black biases than participants in the control condition. Thus, initial evidence suggests that increasing interracial marriage may increase racial biases among White Americans. These findings suggest that depictions of interracial marriage in the media may have important implications for racial attitudes and the racial climate in the U.S.—potentially heightening racial biases among racial majority group members.

Reach out in the Darkness: How Unfair Treatments Shape Social Connection Motivation

EXTENDED ABSTRACT

A considerable portion of research is in the context of justice, and much has focused on how different psychological factors influence consumers' perception of justice, particularly the fairness of prices (e.g., Bolton and Alba 2006; Bolton, Keh, and Alba 2010; Bolton, Warlop, and Alba 2003; Campbell 1999, 2007; Haws and Bearden 2006; Jin, He, and Zhang 2014; Xia, Monroe, and Cox 2004). However, the influence of experience of injustice on unre-

lated consumer behaviors is still largely unknown. The current research attempts to fill this gap of knowledge through investigating the impact of injustice experiences on consumers' desire for social connectedness.

Experience of injustice may lead to many negative consequences, such as retaliation (Brebels, De Cremer, and Sedikides 2008), negative feelings such as anger, fear, guilt, and shame (Mikula, Scherer, and Athenstaedt 1998), health problems like depression (Kessler, Mickelson, and Willams 1999) and distress (Schulz et al. 2000), and even anti-social behavior (Greenberg 1993). Given the fundamental role of justice in human life (Tolman 2006), it is not surprising that people develop an inherent need to believe in a just world in which everyone gets what they deserve and deserves what they get (Lerner 1965, 1980; Fischer and Skitka 2006). This justice belief can also be categorized as an important personal resource that helps people to cope with various negative events that occur in daily life (e.g., Dalbert 2001, 2009; Montada 2003).

Facing violation of this belief, such as unjust or unfair events (Hafer and Begue 2005), while there has been plenty of evidence for the within-domain compensation by maintaining the integrity of their personal belief in justice (Haynes and Olson 2006; Hafer 2000; Callan, Kay, Davidenko, and Ellard 2009; Jost, Banaji, and Nosek 2004), there are alternative ways to compensate for this resource deprivation. Social connection, as interpersonal resource (Correll and Park 2005), can be substituted for or replaced by other types of psychological resources, for example financial resources (Duclos, Wan, and Jiang 2013). People also use social connection to compensate for lack of resources in other domains. For instance, the lack of social power and social status has been found to increase the need to belong, which represents an individual's desire for social connectedness (Waytz, Chou, Magee, and Galinsky 2015). Taken together, we propose that experienced injustice will threaten one's belief in justice and make people feel a shortage or deprivation of psychological resources, which will subsequently lead to a higher desire for social connectedness.

Furthermore, we predict that self-esteem moderates the influence of injustice on the desire for social connectedness, because self-esteem, as a psychological resource (Stets and Cast 2007), could compensate for a lack of social connection (Baumeister and Leary 1995). Specifically, the influence of experienced injustice on the desire for social connectedness should be less prominent among people with high self-esteem compared to those with low self-esteem. One survey and two studies examined these possibilities.

In Study 1, we found the positive effect of injustice experiences on the desire for social connectedness by looking at consumers' social networking behavior from a large-scale national survey (China Family Panel Studies). The experience of injustice was inferred from responses to four different unjust situations ("being treated unjustly because of the gap between the rich and poor, household registration, gender, and being treated unjustly by government officials"). As the dependent variable, we recorded the responses of interviewees to four items concerning their online and offline social networking behaviors.

Study 2 tested the effect of injustice experiences on the desire for social connectedness and the mediating role of perceived resource deprivation by measuring evaluation of an anthropomorphized product to examine consumers' desire for social connectedness (e.g., Epley, Waytz, and Cacioppo 2007; Epley, Akalis, Waytz, and Cacioppo 2008). We expected that injustice experience would lead to a heightened evaluation of the anthropomorphized (but not the neutral) product. Mturk participants (N=293) were randomly assigned to a 3 (injustice vs. negative mood vs. control) X 2 (anthro-

pomorphized vs. neutral) between-subjects design. In the injustice condition, participants recalled an unjust or unfair incident. In the negative mood condition, participants recalled a physically painful incident. And in the control condition, the participants recalled what they ate and drank yesterday. Then, participants reported to four-item measurement of resource deprivation (adapted from Callan, Shead, and Olson 2011). Finally, the participants evaluated either a anthropomorphized vacuum cleaner or a neutral vacuum cleaner. Consistent with our expectation, participants in the injustice condition gave a higher evaluation to the anthropomorphized product than those in both negative-mood condition and control condition, whereas the latter two conditions did not differ from each other. Moreover, this effect is mediated by perceived resource deprivation.

Study 3 tested the moderating role of self-esteem. Mturk participants (N=180) were randomly assigned to either an unfairness or a control condition. In the unfairness condition, participants were asked to recall a particular incident in which others had personally treated them unfairly, whereas participants in control condition were simply asked to recall the last grocery shopping experience. Then, we measured the social connection motivation of the participants using the Need to Belong Scale constructed by Leary et al. (2013). Finally, the chronic self-esteem of participants was inferred from their responses to the Rosenberg (1965) Self-Esteem Scale. As expected, unfair experiences increased the participants' desire for social connection. Importantly, the effect was more salient when an individual's self-esteem was low and was not evident when self-esteem was high.

In summary, experienced injustice increased consumers' desire for social connection. Moreover, this effect is mediated by the feeling of resource deprivation, and moderated by consumers' self-esteem.

Our research is the first to show that past experiences of unfair treatments could induce potential "positive" consequences among victims. Our findings also provide further evidence that the social resources an individual possesses can serve as a buffer for the influence of threat and negative experiences.

Perceptions of your #MeToo post: Men and women see it differently

EXTENDED ABSTRACT

Sexual assault victims are often marginalized, shamed, and stigmatized into keeping silent about their assault (Weiss, 2010). Sexual assault is, unfortunately, a common occurrence in the United States with one in three women and one in six men experiencing sexual assault in their lifetime (Smith et al. 2017). Extant literature has focused on the impact of sexual assault on women's physical and psychological health (e.g., Chivers-Wilson 2006). Sexual assault has been linked to post-traumatic stress disorder, depression, suicidality, and substance use (Campbell, Dworkin, and Cabral 2009). According to Campbell et al. (2009) "rape is one of the most severe of all traumas, causing multiple, long-term negative outcomes. Between 17% and 65% of women with a lifetime history of sexual assault develop post-traumatic stress disorder."

Yet, in recent times, the "MeToo" movement has encouraged women across the world to share their sexual assault stories through social media. In fact, in October 2017, the #MeToo hashtag reached over 12 million posts on Facebook in under 24 hours (CBS News, 2017). This strategy of sharing sexual assault stories, coupled with positive social reactions and support from family, friends, and significant others, predicts less mental distress post-assault (Campbell et al. 2010).

Despite the prevalence of the #MetToo movement, little is known about how this type of self-disclosure is perceived by employers, buyers, or sellers. Whether perceptions of others are right or wrong, they are formed shockingly quickly; Willis and Todorov argue that we form first impressions within the first 100 milliseconds of meeting another person (2006). As such, it is possible to believe that a #MeToo disclosure will impact perceptions. For example, other types of self-disclosures, like motherhood, impact people's perceptions of the woman's competence, warmth, commitment, and effectiveness in the workplace (Correll, Benard, and Paik, 2007; Cuddy, Fiske, and Glick 2004).

The current research demonstrates that women and men respond differently when learning that a person has been a victim of sexual assault. In our experiment, sellers are introduced to the Facebook marketplace, a real online marketplace where Facebook users can buy and sell goods from one another. Through this real marketplace, buyers and sellers have the ability to click on users' Facebook profiles. We used this marketplace for our experiment, a naturally occurring setting where buyers can learn more information about a seller's posts on social media.

We recruited 126 participants (62% female) from a large Western university in exchange for a small monetary payment. Participants were asked to review a new Amazon gift card being sold on Facebook's marketplace, as well as the seller's profile. Participants were randomized into one of three conditions, each showing the same seller with a slightly different profile. The three conditions are the following: (1) the seller's recent post disclosed a past sexual assault and their support for the #MeToo movement, (2) the seller's most recent post was sharing (retweeting) a friend's post containing the same exact content as in condition 1, and (3) the seller's most recent post was about a recent concert, unrelated to #MeToo (our control). Participants then reported their willingness to pay for the Amazon gift card ($0-$100), as well as their perceptions of the seller's competence, trustworthiness, threat, ability to reach a deal, and societal status.

Using a linear regression model, our results show a significant interaction between participants' gender and our conditions on willingness to pay for the Amazon gift card (b= -29.34, t(120)=-2.25, p=.024). In the control, women offered $81.73 for the Amazon gift card, on average. However, when the seller disclosed their sexual assault, women offered just $61.90 (a 23.9% decrease) for the same gift card (p=0.023). In contrast, men offered $73.90 for the item in the control condition and increased their offer to $83.90 (a 13.5% increase) when the seller disclosed their sexual assault (*ns*). Additionally, compared to the control, women offered $70.90 *(ns)* to the seller who reposted another person's sexual assault post, while men offered $76.40 *(ns)*. This result shows early indicative evidence that the effect is borne by sexual assault victims, and not by allies who support them.

Additionally, men and women differ in their perceptions of the sellers' societal status (not in their competence, trustworthiness, or threatening perceptions). We find a significant interaction between gender and our conditions on perceptions of status (b= -1.64, t(120)=-2.19, p=.030), such that on a 1-9 scale, women (men) perceive the seller to have lower (higher) status if their Facebook profile contains a #MeToo post compared to the control.

Our study shows that sharing a sexual assault experience could lead to both positive and negative societal outcomes, depending on the audience. The risk of negative societal outcomes when sharing a sexual assault story could contribute to explain why women often underreport their sexual assault experiences. Notably, we find similar patterns across men and women in other experimental contexts, such as when participants propose a starting salary for a job candidate after reviewing the candidates' LinkedIn profile and Twitter feed.

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Rethinking the Stability of Consumer Impatience:
How Consumer Intertemporal Preferences Vary Across
Types of Goods and Decision Contexts

Chairs: Oleg Urminsky, University of Chicago, USA
Jennifer Trueblood, Vanderbilt University, USA

Paper #1: Patient For Candy or Cash? The Robustness of Impatience Across Affect-Rich and Affect-Poor Resources

Oleg Urminsky, University of Chicago, USA
Timothy Kim, University of Chicago, USA

Paper #2: The Sign Effect in Consumer Intertemporal Choice: Evidence and Explanation

David Hardisty, University of British Columbia, Canada
Elke U. Weber, Princeton University, USA

Paper #3: Thinking Fast Does Not Increase Temporal Myopia in Decision-Making

Jennifer Trueblood, Vanderbilt University, USA
Breanna Crane, Vanderbilt University, USA

Paper #4: Scarcity and Intertemporal Choice: An Integrative Framework

Eesha Sharma, Dartmouth College, USA
Stephanie Tully, University of Southern California, USA
Xiang Wang, University of Florida, USA

SESSION OVERVIEW

Consumer decision-making often involves explicit or implicit tradeoffs between larger-later vs. sooner-small benefits (Bartels and Urminsky 2015, Bazerman et al 1998, Hoch and Loewenstein 1991, Thaler and Shefrin 1981). Intertemporal preferences have been studied using variants of hyperbolic discounting as a model for short-sighted decisions and failures of self-control (Ainslie 1975). This literature has debated how people value delayed rewards and how intertemporal preferences relate to consumer behavior, using a limited toolbox of research paradigms. Research on intertemporal choice has made great progress and our understanding of time discounting is now much richer than the simple hyperbolic discounting model. In the modern view, impatience is not only an individual difference, but varies by context: the same person will be more patient in some decisions and less patient in others. This variation has been discussed in terms that correspond to a dual-process view of decisions (Sloman 1996, Hoch and Loewenstein 1991, Loewenstein 1996, Baumeister 2002). In this view, people are impatient when they are rushed, resource-constrained, facing tempting options or deciding about small stakes. In contrast, when people have more time to decide, don't face resource pressures, and are making important practical decisions, they are more deliberative and patient. In short, they *become wiser*.

This generalization has been useful at organizing an often messy literature and has been generative in producing new hypotheses about consumers' decisions. However, the descriptive adequacy of this perspective has not been thoroughly tested. The papers in this session are all motivated by the same broad question: how do contextual factors affect intertemporal preferences? Each paper investigates a different contextual influence, rethinking and testing the cognitive processes involved in making intertemporal tradeoffs. The novel findings in this set of papers challenge the established wisdom that contextual factors merely shift people from a "fast" system to a "slow" system (and vice versa), and instead reveal richer cognitive processes in intertemporal choice.

The first two papers rethink effects of choice options on impatience. **Urminsky and Kim** identify diminishing marginal utility as a confound in the prior evidence that people are more impatient for affect-rich goods than cash. In studies designed to correct for or avoid this confound, they demonstrate that in fact people are *more* patient for goods than money. **Hardisty and Weber** question the loss aversion explanation for the "sign effect" (more far-sightedness for losses than gains) and find instead that it is better explained by asymmetries in anticipation.

The last two papers rethink the effects of the decision-maker's situation on impatience. **Trueblood and Crane** find that limiting deliberative processing through time pressure does not simply make people more impatient. Instead, time pressure makes people less sensitive to information, particularly the length of the delay, resulting in both less and more patience. Likewise, **Sharma, Tully and Wang** question whether scarcity always leads to short-sighted decisions and demonstrates that a better understanding of people's needs can predict when scarcity instead leads to decisions favoring the longer-term. Together, these papers point the way to a richer understanding of consumer impatience.

Patient For Candy or Cash?
The Robustness of Impatience Across Affect-Rich and Affect-Poor Resources

EXTENDED ABSTRACT

Research on self-control has long assumed that failures to delay gratification involve affective responses to hedonic options (e.g., Metcalfe & Mischel 1999). This kind of impatience can be understood in terms of temporal discounting. Specifically, the "affective discounting" hypothesis (Vallacher 1993, Loewenstein 1996) suggests that people will be more impatient when making tradeoffs involving more affectively rich outcomes.

Based on this theory, researchers have contrasted people's discount rates for money and for hedonic goods. Using traditional discounting tasks, in which people choose between less of a resource sooner or more of the resource later, researchers documented a striking empirical regularity: higher discount rates for goods than for money. In over 20 papers, greater impatience has been found for drugs, alcohol, cigarettes, health, food and non-consumable goods (books, DVDs, music, laptops and TVs) than for money (e.g., Sultan and Winer 1993, Tsukayama and Duckworth 2010; see Urminsky and Zauberman 2016 for a review).

These results strongly support the affective discounting hypothesis, suggesting that hedonic rewards lose more subjective value when delayed than do non-hedonic goods or money. However, some research has questioned this conclusion, despite the strong evidence (e.g., Paglieri et al 2015). In particular, Urminsky and Kivetz (2003) find that people are less willing to pay to expedite hedonic goods than practical goods. In four studies, we employ new methods to test the affective discounting hypothesis in general and specifically to test whether people are more impatient for hedonic goods. We first test present bias and long-term discount rates across goods.

In Study 1 (N=670, pre-registered), participants chose between 12 units sooner (of either dollars, candy bars, bags of chips, beer, or new socks, between-subjects) or 16 units of the same good later. Participants chose between now and in a month, as well as between six and seven months (counterbalanced). For all goods, we find significant present bias (greater preference for the later-larger option when both options are delayed; differences between 11% and 22%, all ps<.02). However, there are no significant differences in present bias across the goods, contrary to the assumption that, because hedonic goods lose more value when delayed, they should exhibit more present bias.

In Study 2 (N=849, pre-registered), participants chose between 12 units in six months (of the same goods as Study 1, between-subjects) or 16 units of the good, either in seven months or in one year (counterbalanced). For all goods, we find significant long-term discounting (greater preference for the later-larger when it is delayed by six months than one month). Contrary to the affective discounting hypothesis, however, we observe *greater* impatience for money (83% vs. 35% waiting, for a 48% difference) than for socks (difference=36%, p <.001), candy bars (35%, p <.001) and beer (29%, p <.001) and directionally greater than chips (39%, NS).

Our results contradict the prior literature, which instead measured discounting by testing how much more of a good would need to be offered in the future, for people to choose to wait. The approach used in the prior literature confounded time preferences with good-specific diminishing marginal utility. In Study 3 (N=249, pre-registered), we measured the subjective utility of different amounts (1, 2, 4, 8, 12 and 16 units) of each good, relative to money. We find that all goods have flatter diminishing marginal utility than money (all ps<.001). For example, 2 candy bars are worth, on average approximately $1.50, but 16 candy bars (8 times as much) are only worth approximately $2.60. This confirms that the higher impatience for goods found in prior research may simply be explained by the fact that additional units of the good are seen as providing little additional value, and therefore serve as poor compensation for waiting.

To test this explanation directly, Study 4 (N=389, pre-registered) extended the methods in Tsukayama and Duckworth 2010 (including socks as an additional good) to enable us to distinguish between present-bias and long-run discounting, and also measured diminishing marginal utility of each good relative to money, as in Study 3. We replicate the findings of Tsukayama and Duckworth 2010, finding greater impatience for all goods than for money. Furthermore, fitting a good-specific quasi-hyperbolic model (Angeletos et al 2001) on the raw data, we find that the effect is driven by a seemingly lower beta (greater present bias) for chips, candy bars and beer than for money (all ps<.001), with beta for socks similar to money. There were no significant differences in long-run discount rate.

However, when we control for the diminishing marginal utility of each good, the results are dramatically different. Modelling the *utility* of each quantity of goods (rather than the units) we no longer find more present bias for goods than for money, and we find more patient long-run discounting for all four goods than for money (all ps<.001), as in Study 2. This suggests that the prior findings were due to the methods used, which confounded impatience and diminishing marginal utility.

Lastly, in Study 5 (N=402, pre-registered), we replicated the results of Study 4, and also tested an alternative measure of consumer patience, how much monetary compensation people require to delay goods or money. Based on monetary compensation (which avoids the diminishing marginal utility confound in the prior literature) we find greater patience for goods than for money, driven by lower long-run discount rates for goods (all ps<.01), as in Study 2 and 4.

Overall, these findings contradict the affective discounting hypothesis and suggest that people are in fact more willing to wait for goods than for money. Differential impatience across types of goods seems to have less to do with the affective response to hedonic products, and perhaps has more to do with the fungibility and usage rate of a good. These results establish that, when it comes to temptation, cash is king.

The Sign Effect in Consumer Intertemporal Choice: Evidence and Explanation

EXTENDED ABSTRACT

Consumers constantly make choices about what to have now, and what to put off until later. For example, enjoy a paycheck now, or invest it for retirement? Many factors influence preferences regarding the timing of outcomes (Frederick, Loewenstein, & O'Donoghue, 2002; Lynch & Zauberman, 2006). Some of them should apply equally to positives and negatives. For example, the uncertainty that a future event will happen provides as strong of a reason to postpone something negative as to accelerate something positive. Similarly, the interest lost by delaying a $100 reward for a year is equivalent to the interest gained by delaying a $100 loss, and the more that a consumer is connected to their future self, the more they should care about both future gains and future losses (Zhang & Aggarwal, 2015).

Despite these symmetries, laboratory studies typically find that the desire to have good things immediately is much stronger than the desire to postpone negative outcomes (Hardisty & Weber, 2009; Thaler, 1981). Put another way, discount rates for future gains are much higher than discount rates for future losses. Though this "sign" effect has been found with basic "JDM" type SS/LL scenarios, it has been largely ignored in consumer behavior contexts, and the processes driving it are not well understood. Perhaps as a result, the dominant models of consumer choice have largely ignored differences in discounting between positives and negatives. This is a major oversight, given that identical outcomes can be framed as positive or negative events merely by changing the reference point (e.g., energy savings vs energy costs, time gained vs lost).

We test two competing process accounts of the sign effect: loss aversion vs anticipation asymmetry. The loss aversion account is elegant: we know that consumers weigh negative events roughly twice as much as positive events (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Kahneman & Tversky, 1979), and that consumers are more patient for larger magnitude events (Kirby, 1997; Thaler, 1981). Therefore, negative events may be discounted less because they are subjectively larger in magnitude. The elegance and simplicity of this theory has led to its inclusion in several formal models of intertemporal choice (al-Nowaihi & Dhami, 2009; Baucells & Bellezza, 2016; Loewenstein & Prelec, 1992), though it has not been empirically supported.

The second theory, anticipation asymmetry, is one that has perhaps been implicit in research on dread (Berns et al., 2006; Harris, 2010; Story et al., 2013), but has never been explicitly proposed or directly tested as an explanation of the sign effect. According to this theory, the desire to postpone negatives is weaker than the desire to accelerate positives because the (painful) contemplation of future bad things is more intense than the (pleasurable) contemplation of future good things. Thus, while people have a natural impulse to postpone a negative experience (such as paying a bill), the desire to minimize dread pushes in the opposite direction, leading a moderate time preference (i.e., low discount rates for negative events). In contrast, the impulse to receive positive experiences (such as a package in the mail) as soon as possible is barely influenced by anticipatory

feelings, resulting in a strong positive time preference (i.e., high discount rates for positive events).

We present three studies demonstrating the effectiveness of the sign effect in consumer decisions, supporting the "anticipation asymmetry" explanation of the sign effect, and clearly disproving the "loss aversion" explanation.

In Study 1, participants (N=200 MTurkers) imagine buying a pair of glasses, and must choose between two different payment plans, which are framed as gains or losses. In the gain frame, they choose between A) pay \$122 now or B) pay \$142 now, and receive an automatic \$30 rebate in one month. In the loss frame, they choose between A) pay \$122 now, and automatically pay another \$30 in one month, or B) pay \$142 now. From a rational economic perspective, the two frames are equivalent (starting with the gain frame and subtracting "\$30 in one month" from both options yields the loss frame). Yet, we find that participants choose the "impatient" option A 56% of the time in the gain frame and only 10% of the time in the loss frame, demonstrating the sign effect. We also ran a "small magnitude" condition, where all the dollar amounts were half as large. Comparing the large gain condition (56%) with the small loss condition (8%), we see that the sign effect is equal or even larger after correcting for loss aversion, thus casting doubt on this explanation. We asked participants about their anticipation of the delayed gain or loss, and found that anticipation was more intense for losses than gains, $F(1,196)=12.85$, $p<.001$, $\eta_p^2=.06$. Furthermore, ratings of anticipation mediated the effect of sign on choices, indirect effect $b=.38$, $SE=.14$, CI_{95} [.17, .74].

Study 2 was a field study, in which we compared the click-through rate (CTR) of four different advertisements for a retirement calculator on Facebook, using their "AB Testing" feature. Consumers (N=28,568) were randomly assigned to see either a basic positive message ("Start building your retirement benefits today!", 1.84% CTR), a positive anticipation message ("Looking forward to your retirement benefits?", 2.58% CTR), a basic negative message ("Start taking care of your retirement expenses today!", 2.03% CTR), or a negative anticipation message ("Worried about your retirement expenses?", 3.63% CTR). This negative anticipation condition had a higher CTR than every other condition, all pairwise $p<.01$.

In Study 3, participants (*N*=150 students) consumed positive and negative flavored jellybeans in the lab, such as blueberry flavor or dirt flavor. For each participant, we dynamically titrated 20 flavors to find good and bad flavors that were equal in intensity for that person, thus controlling for loss aversion. Participants then chose when to eat each jellybean. 63% chose to eat the good flavor immediately, whereas only 32% delayed the bad flavor, replicating the sign effect, $p<.001$. Furthermore, anticipation was stronger for the negative flavor, and anticipation mediated the sign effect, $p<.01$.

Thinking Fast Does Not Increase Temporal Myopia in Decision-making

EXTENDED ABSTRACT

In intertemporal decision-making, a commonly held hypothesis is that patient choices (i.e., preference for delayed over immediate rewards) require deliberative processing (McClure, Laibson, Loewenstein, & Cohen, 2004) and executive control (Hinson, Jameson, & Whitney, 2003). The key idea is that patience requires effort and time since it relies on overriding automatic impulsiveness. Thus, taxing executive processes and increasing reliance on automatic processes should increase temporal myopia, i.e., impulsiveness. In our studies, we use time pressure to limit executive resources and engage automatic processes. In previous research, time pressure has been used to constrain individuals' cognitive capacity, to shed light on choice deferral (Dhar and Nowlis 1999), habitual decisions (Wood and Neal 2009) and risky decision-making (Guo, Trueblood, and Diedrich, 2017). Going beyond traditional statistical analysis, we use computational modeling to unpack the cognitive processes that are influenced by time pressure.

In our first study, online participants (N = 101) made binary choices between a small immediate reward (available "now") and a larger delayed reward. Each participant completed 4 blocks of 30 randomized trials where two blocks involved time pressure (1.5 seconds) and two did not. The time pressure and no time pressure blocks alternated with half of participants randomly assigned to start with the time pressure block. There were 24 main trials constructed by crossing 4 time delays (3, 6, 12, and 24 days) with 6 pairs of monetary amounts (\$14 vs. \$17, \$17 vs. \$20, \$14 vs. \$20, \$35 vs. \$42.50, \$42.50 vs. \$50, \$35 vs. \$50). The remaining 6 trials in each block were catcher trials where the immediate option had the larger reward. The options were displayed to participants using two different formats (varied between subjects): a standard verbal display and a novel perceptual display termed a "calendar grid". In the perceptual display, options were represented by 4x7 grids where each cell in the grid represented one day with the top left cell representing "now". We symbolized the monetary values with 6 colors and trained participants to associate colors with their corresponding amount. By using different display formats, we control for the effects of display on decisions, which have been shown to impact behavior (Kwak & Huettel, 2018).

Results from Study 1 showed that as time delay increased (from 3 to 24 days) impulsive (sooner-smaller) choices also increased, consistent with time discounting ($F(1.84,167.4) = 33.295$, $p < .001$, $\eta_p^2 = .268$). In addition, there was a significant interaction between time pressure and time delay ($F(3,273) = 13.335$, $p < .001$, $\eta_p^2 = .128$), where time pressure increased impulsive choices for shorter delays (3-6 days) and decreased impulsive choices for longer delays (12-24 days). These results held for both display formats.

Study 2 (N = 35) was an incentive-compatible laboratory replication of Study 1 where display was a within-subjects condition (all participants completed both displays with 4 verbal and 4 perceptual blocks). The results of this study are consistent with Study 1. As time delay increased impulsive choices also increased ($F(1.55,34.17) = 31.611$, $p < .001$, $\eta_p^2 = .590$). In addition, there was a significant interaction between time pressure and time delay ($F(2.284,50.24) = 10.618$, $p < .001$, $\eta_p^2 = .326$), where time pressure increased impulsive choices for shorter delays and decreased impulsive choices for longer delays.

Our behavioral results suggest time pressure does not universally lead to increased preference for immediate options, contrary to prior accounts. Rather, patience decreased for shorter delays and increased for longer delays. Importantly, these results hold for verbal and perceptual displays and for hypothetical and incentivized choices. To investigate the underlying cognitive mechanisms impacted by time pressure, we used computational modeling to unpack these latent processes. In our model, we assume that decisions are made by sequentially sampling information over time until an internal decision criterion is met. Since the 1960s, this general modeling framework has been successfully applied in almost every area of cognitive psychology including memory (Ratcliff, 1978), perception (Ratcliff, Voskuilen & Teodorescu, 2018), categorization (Nosofsky & Palmeri, 1997), and decision-making (Busemeyer & Townsend, 1993) and has more recently been linked to neural processing in the brain (Gold & Shadlen, 2007). For our purposes, the main component of interest is the internal decision criterion. Through model simulations,

we show the impact of time pressure in our study can be explained by a reduction in the decision threshold. That is, when people are given limited time to decide, they simply use less information (i.e., are less sensitive to delay length) to make decisions. They do not fundamentally change the way they process the information they are given, for example using automatic rather than deliberative processes. The reduction in decision threshold that we observe is a common strategy that people use when making speeded decisions across a range of paradigms from memory to perception (Dutilh et al., 2018).

Our findings help explain how time pressure influences intertemporal choice. Our results show no evidence for increased temporal myopia under time pressure, in contradiction with theories of impulsiveness based on limited executive functioning and automatic processing. Rather, our results are easily explained by a change in people's decision criterion when forced to make fast choices, a strategy consistent with speeded decision-making in memory and perception.

Scarcity and Intertemporal Choice: An Integrative Framework

EXTENDED ABSTRACT

Most people experience scarcity at some point. Current theories largely purport that scarcity leads to short-sighted decisions (e.g., Haushofer and Fehr 2014; Shah et. al 2012; Tanaka et. al 2010). These theories largely suggest that scarcity reduces attention to and consideration of future consequences. While many studies support this perspective, contradictory findings exist that these theories cannot account for. For example, scarcity has been shown to lead to greater consideration of opportunity costs and greater planning (e.g., Fernbach, Kan, and Lynch 2015; Spiller 2011). Recent research has also questioned the replicability of some of the seminal findings supporting the relationship between scarcity and myopia (Camerer et. al, 2018).

In light of these contradictory findings, we propose a new theory for the effects of scarcity on intertemporal choice. Specifically, we argue that scarcity facilitates a strategic orientation in service of meeting one's most important need(s), which may or may not be proximal or imminent. Accordingly, we expect scarcity to result in decisions that favor the short-term when, and only when, people believe those decisions are in service of meeting their most important need(s). This perspective allows us to identify when scarcity will *not* lead to preferences for smaller sooner outcomes, and allows for the novel prediction that scarcity will lead to decisions that favor the longer-term when waiting for later outcomes better enables people to fulfill their most important need(s).

If the effect of scarcity on intertemporal choice is a function of a strategic orientation towards fulfilling one's most important needs, the effect of scarcity on preferences for smaller, sooner outcomes should depend on whether additional resources are required in the shorter-term. In study 1, participants considered the same need (repaying a car loan) but focused on either a shorter-term (this month's payment) or longer-term component (repaying the entire loan), and we varied whether participants had sufficient or insufficient resources for this need. The predicted interaction, Wald $\chi^2 = 14.60$, $p < .001$, showed that when the need was framed as shorter-term, scarcity led to a preference for a smaller, sooner payment option, Wald $\chi^2 = 27.48$, p < .001. However, there was no difference when the need was framed as a longer-term need.

One possibility is that the effects in study 1 occurred because unmet shorter-term needs activate impulsive decision-making. To disentangle this possibility from our proposition, in study 2, we asked participants to consider two needs that varied in importance and the time when resources were needed to fulfill the need. The study followed a 2 (scarce vs. abundant) X 2 (type-of-short-term-need: more vs. less important) design. We found the predicted interaction, Wald $\chi^2 = 5.52$, $p = .019$. When the shorter-term need was more important, scarcity increased preference for a smaller, sooner payment, Wald $\chi^2 = 10.62$, $p = .001$. Scarcity had no effect when the shorter-term need was less important, Wald $\chi^2 < 1$.

In study 3, we used natural variation in the unfulfilled needs people deemed most important. The study was run in December, and participants in the scarcity condition wrote about something important they didn't have enough money for. There were two dependent measures. The first was a choice between completing two online studies. One would occur sooner but would pay less, and the other would occur after New Year's but pay significantly more. The second dependent measure was an intertemporal choice unrelated to money. After completing these questions, participants in the scarce condition indicated whether getting money before Christmas was necessary in order to meet the need they had written about (binary choice). In line with our pre-registration, participants in the scarcity condition who needed money before Christmas were more likely to choose the sooner study with smaller compensation, Wald's $\chi^2 = 23.94$, $p < .001$, whereas participants in the scarcity condition who did not need the money before Christmas were more likely to choose the later study with larger compensation, Wald's $\chi^2 = 6.70$, p = .010. There were no differences for the non-monetary dependent measure.

In study 3, one possibility is that the measure capturing need-for-money-later simply captured general time preference. Thus, in study 4, we manipulated scarcity across all participants but varied whether the dependent measure was relevant to the threatened need. All participants listed an important need they had insufficient resources for, but we varied whether that resource was money or time. Then, participants completed an incentive-compatible monetary titration task in which they chose between $30 now or a larger amount 45 days later. Next, participants indicated the extent to which they needed additional resources (money or time) within the next 45 days to meet the need they had written about. We found the predicted interaction, $t(413) = -3.81$, $p < .001$. Among participants who needed resources in the shorter-term, those facing monetary (vs. time) scarcity preferred the smaller, sooner amount of money; however, among those needing resources in the longer-term, those facing monetary (vs. time) scarcity preferred the larger, later amount of money.

In study 5, we examined a common situation in which people experience scarcity due to a future expense: a wedding. We posted ads for the study on Facebook, targeting individuals who were recently engaged. We offered a lottery to win money in exchange for completing the study. Participants reflected on aspects of their upcoming wedding, focusing either on what they were most concerned about being able to afford (scarcity condition) or what they were most excited about (control condition). Then, participants chose whether they would prefer getting the advertised lottery amount now, or a larger amount in three months. As predicted, those in the scarcity (vs. control) condition were more likely to choose the larger, later amount, Wald $\chi^2 = 4.23$, $p = .040$.

In sum, these results provide a more accurate understanding of why and when scarcity influences intertemporal choices. Our theory suggests that the relationship between scarcity and intertemporal choice is better explained in terms of a strategic orientation towards fulfilling one's most important needs (vs. impulsivity or lack of consideration of the future).

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Post-Colonial Theory:
Consumer Empowerment through Marketplace Decolonization

Chairs: Michal Carrington, University of Melbourne, Australia
Ai Ming Chow, University of Melbourne, Australia
Julie L. Ozanne, University of Melbourne, Australia

Paper #1: Racialized Brands: A By-Product of Cultural Branding

Ela Veresiu, Schulich School of Business, York University, Canada

Paper #2: Colonial Advertising, Desubjectification, and Epidermalization of Servitude in India

Rohit Varman, University of Birmingham, UK

Paper #3: 'I am the Old and the New': The Place of Aboriginal Art in the Australian Art World, 1973-2018

Ruth Rentschler, University of South Australia, Australia
Russell Belk, Schulich School of Business, York University, Canada

Paper #4: Indigenous Art Market: A Site of Cultural Production or Cultural Assimilation?

Ai Ming Chow, University of Melbourne, Australia
Michal Carrington, University of Melbourne, Australia
Julie L. Ozanne, University of Melbourne, Australia

SESSION OVERVIEW

We may be living in a "postcolonial world," but the vestiges of colonialism live on—often mediated by markets and reproduced through marketing practices. In this special session, we trace the trajectories of past marketing practices and cultural forces into the present to understand opportunities and obstacles for consumer empowerment through marketplace decolonization. Decolonization represents decoupling from the structures and practices of colonialism (Mignolo 2007).

This session addresses two questions: 1) How do marketing practices reinforce institutionalized representations of colonized people as exotic and disempowered others? 2) How can shifts in macro-market understandings of colonized people impact how they are represented and their opportunities in the marketplace? This session explores colonized people as consumers and producers, as targets of cultural appropriation, and as powerful culture-makers. These four presentations converge on the social construction of colonized people through marketplace practices and structures—seeking to understand opportunities for agency and identify alternative trajectories. These presentations focus on how cultural moments can provide opportunities that empower colonized consumers (e.g., Roma people) and producers (e.g., Australian Aboriginal artists) with the agency to resist and decouple from post-colonized markets. The first two presentations investigate how colonial institutions are reproduced through advertising and continue to haunt cultural branding practices. First, Veresiu shows how the framing of colonized subjects as "exotic others" continues in contemporary marketing practices. Veresiu explores resistance by Roma consumer activists towards the Knorr Gypsy Sauce branding, revealing strategies of justification enacted by marketers to legitimate interlacing colonial logics and racialized representations in cultural branding. Second, Varman analyses historical advertising to understand representations of colonized Indian people. Varman illustrates colonial agendas of disempowerment and enslavement underpinning advertising imagery of those times. Varman highlights the vestiges of colonialism and "epidermal

schema"—logics based on skin color—that remain at the fringes of marketing practice.

The next two presentations focus on the Australian Aboriginal art market to investigate how markets represent colonized people as producers of culture, and how these representations are influenced by macro-level cultural changes. Rentschler and Belk analyze the appropriation and representation of Aboriginal Art by a formal institution—the Australian Council for the Arts. They examine how representations of Aboriginal art and artists by powerful institutions shift to mirror social changes in broader Australian culture. Chow et al. develop this thread to show how shifting cultural sensibilities and formalized legislation enable Aboriginal artists to fill positions of legitimacy, take control of their marketplace representation, and use the market to their own ends. They explain how producer resistance and market decolonization is possible.

These four presentations employ a range of methods including the analysis of textual and visual archival data, participant observation, and in-depth interviews. They draw on different post-colonial theories including Fanon's (1961) theory of decolonization, Boltanski and Thévenot's (1999) theory of justification, fugitive theory of decolonization (Martineau and Ritskes 2014; Mignolo 2007, 2009). This session will be interesting to researchers seeking in-depth understandings of the impact of colonization on consumers and producers of culture, and to explore avenues for positive change.

Racialized Brands: A By-Product of Cultural Branding

EXTENDED ABSTRACT

From Uncle Ben's to Aunt Jemima to Miss Chiquita to Eskimo Pie's Inuit child to Land O'Lakes' kneeling Native American female to Knorr's Gypsy sauce, the perseverance of market-mediated representations of exotic otherness in famous food brands is striking. Following the principles of cultural branding (Holt 2004, 9), iconic brands for everyday products such as soda and beer are created by mainstream brand managers over time using stories stemming from minority populist worlds that "exist at the margins of society" including rural Appalachia, the African-American ghetto, or the Mexican beach. These marketplace myths are embodied in a "brand's markers (e.g., its name, logo and design elements)" (Holt 2004, 8) and consumed by dominant groups who perceive them as authentic representations of other cultures. Periodically, consumer activists from populist worlds publicly protest their cultures' commercial appropriation and brands' racist connotations. From a more critical perspective, consumer researchers have argued that cultural branding helps provide pictures of prejudice (Bouchet 1995), destroys authentic human communities (Muniz and O'Guinn 2001), sustains neocolonial power imbalances (Ger et al 2018; Veresiu and Giesler 2018a), and creates racialized myth markets (Veresiu and Giesler 2018b). Yet, how do racialized brands maintain their legitimacy despite consumer activist calls for change?

Outside of branding research, according to sociologists Boltanski and Thévenot (1991), social life consists of critical moments where individuals express their discontent by exchanging criticisms, grievances, and blame. In such situations of dispute, both the criticizer and the criticized justify their actions through six main logics or "orders

of worth" (1991, 15): civic, market, industrial, domestic, inspiration, and fame. The scholars (Boltanski and Thévenot 1991) further argue that these justifications conflict with one another as individuals compete to legitimize their own opinions over others. In other words, "in contested institutional environments, […] focal organizations and other stakeholders have to engage in continuous work of justification across available orders of worth, in order to maintain an acceptable level of legitimacy for their actions" (Patriotta et al. 2011, 1806). Building on Boltanski and Thévenot's (1991) justification theory, I argue that cultural branding represents a contested institutional environment where activist consumers initiate a critical moment that sets in motion a series of justifications. However, it remains theoretically unknown and empirically unverified which justification logics apply in the cultural branding realm.

Hence, to empirically investigate the racialized cultural branding phenomenon, I focus on the market-based battle between minority-group activist consumers and dominant-group Unilever brand managers in Germany over the popular Knorr Gypsy Sauce. Methodologically, I collected archival media data consisting of German online and in-print coverage of the controversial Gypsy sauce topic, which uses a racist term for an ethno-race known as Roma, as well as semi-structured interviews with Roma consumers and Unilever employees. A hermeneutical approach (Thompson 1997) was used to analyze the complete data set. To provide context, the Roma are a traditionally nomadic, clan-based people who travelled from India across Europe during the Middle Ages (Belton 2005). Currently there are between 170,000 to 300,000 transnational individuals who reluctantly self-identify as the two main clans (Roma or Sinti) in Germany, especially since up to 1.5 million were murdered during National Socialism (Minority Rights Group International 2018). Today, the Roma/Sinti continue to be disparagingly referred to as "Zigeuner" (meaning Gypsy in the German language) by the indigene German population. Furthermore, the tomato-based "Zigeunersauce" (Gypsy sauce) persists as a staple in mainstream German cookbooks, restaurants, and supermarket shelves from iconic food brands including Heinz, Kühne, and Knorr.

My analysis reveals that Roma/Sinti activist consumers relied exclusively on the civic order with its focus on collective welfare, equality, and solidarity (Boltanski and Thévenot 1991) to publicly justify renaming Zigeunersauce to paprika or spicy sauce due to its racist connotation. In response, Unilever employees mobilized all five of the remaining logics to publicly justify keeping the original name of Zigeunersauce. These institutional informants first combined the market and industrial orders in what I refer to as an economizing strategy by discussing increased costs and market statistics associated with such a large-scale product rename. Next, they utilized the inspired order through emotional appeals, which I refer to as a romanticizing strategy. This was followed by a historicizing strategy using the domestic order by focusing on the sauce's heritage. Lastly, they resorted to the fame order by discussing brand recall and recognition, which I call a consumerizing strategy. Together the four strategies identified form a process of myth market justification used to depoliticize Knorr's Zigeunersauce racially charged cultural branding meanings. More importantly, a key takeaway relating to consumer empowerment is for brand activists to engage more than one order of worth when fighting for market change. Hence, future research should systematically compare different racialized brands across the world, especially focusing on successful cases to examine which orders of worth lead to changing the racialized cultural branding landscape.

Colonial Advertising, Desubjectification, and Epidermalization of Servitude in India

EXTENDED ABSTRACT

While much of consumer research has attended to how consuming subjects are constituted by advertising, little attention is paid to how commercial representations further colonial discourses and desubjectify vast populations in the Global South. In an historical analysis of advertising in colonial India from 1869 to 1940, I offer insights into how commercial representations were steeped in the recurrent violence of colonization and enslavement. As my data source, I used the archives of *The Times of India*, a leading English daily before and after India's independence in 1947. The newspaper started as *The Bombay Times and Journal of Commerce* in 1838 and became *The Times of India* in 1861. It was owned by British businessmen until 1946, when it was sold to an Indian businessman.

Drawing upon the work of Frantz Fanon (1952), I attend to the ontology of the colonized in which the colonizer's gaze constituted Indians as objects. This colonizer's gaze robbed Indians of their agency and lived experiences, and located any notion of being in relation to the subject positions occupied by the colonial masters. In contrast, as a form of ontological resistance, through advertising the colonized could not do the same to their White masters. In these representations, I draw attention to how, on the one hand, it was popular to show Britishers as consumers of various goods. On the other hand, Indians were mostly marked by their absence as consumers, and their political struggles for freedom were in a state of ellipsis in these advertisements. In particular, at the peak of political movements such as the Non-Cooperation Movement (1920-1922) and the Civil Disobedience Movement (1930-1934), the lived experiences and struggles of the colonized Indians found almost no representation in advertising by British businesses. While the colonial society in the early 20th century was witnessing popular uprisings, the colonized and their emotional worlds were eschewed to maintain the purity of Whiteness in advertising. This failure to afford the weight of intentionality to the emotions of the colonized was affective violence and became an important structural condition of their oppression because it allowed exploitative transfer of the burden of negative affect onto the enslaved. Fanon (1952, 92) refers to this phenomenon as "affective tetanization," through which the colonized became a site of mass projection or collective catharsis for the colonizer and Indian bodies were marked as phobic objects, associated with taboos, the horror of unclean things, and polluting influence that were to be kept away in these commercial representations. Despite the desire of the colonized, as Fanon (1952, 92) reminds us, to be a "man, and nothing but a man," and their rejection of affective tetanization, they were denied recognition as consuming subjects in advertisements. Fanon sees this as a feature of an affective economy of colonialism that requires a site of projection in the process of subject formation. It also means that such presence and absence in colonial advertising echo Fanon's observation that colonialism was not just a system of creation of inferior subjects but also of desubjectification.

Furthermore, in a few advertisements in which Indians were depicted, they were either confined to the background or shown as servants of their White masters. These unequal commercial representations draw attention to Fanon's idea of historicity in which the colonized are caught in an infernal circle wherein the past overwhelms the present at the expense of movement toward a future that might be different from the past. The colonized are determined by the racial-epidermal schema of their stigmatized race. As Fanon (1952, 92) insightfully notes, "the bodily schema, attacked in several places, collapsed giving way to an epidermal racial schema." Here,

Fanon offers a corrective to Merleau-Ponty's (2012) reading of intentionality through bodily schema in which the whole body, with all its sensory, motor, and affective operations, is that through which the world appears. The bodily schema is altered by a racial-epidermal schema because the colonized are forced to see themselves through the colonizers' eyes and their narratives, as Fanon (1952, 95) observes, "I am over-determined from outside….The White gaze the only valid one, is already dissecting me, I am fixed." In colonial advertising, the appearance of Indians in positions of servitude and their disappearance as consumers are racially coded and ossified in their skin colors. As a result, the colonized's bodily schema is subtended by a racial-epidermal schema.

Summing up, my postcolonial reading of advertising furthers consumer research by drawing attention to colonization, servitude, and racial-epidermal schema that remain at the margins of the discipline. Such a reading is particularly necessary because the colonial mode of representation still asserts itself as a natural expression of existing socio-economic relations in postcolonial societies, even though the specific political system characterized by European colonial rule has been defeated.

'I am the Old and the New'[1]: The Place of Aboriginal Art in the Australian Art World, 1973-2018

EXTENDED ABSTRACT

This study presents an analysis of the changes in the presentation of images of Australian Aboriginal and Torres Strait Islander (Aboriginal) art and artists in the Australia Council for the Arts annual reports from 1973 until 2018. We also draw on interviews and observations to examine how these images articulate changing understandings of Aboriginal peoples and culture as Australia began to embrace multiculturalism, postcolonialism, and the rights of indigenous Australians. We ask whether these changing images correspond to transforming program content by this preeminent arts council or whether the images have been appropriated without adequate compensation -- acting perhaps as a metaphor for the historical appropriation of Australia by non-Aboriginal settlers and immigrants over the past several hundred years. The historic pattern of images is considered against the wider transformation of Australian culture at dramatic key points of Aboriginal political protest in the wider community. Surprisingly, the annual reports are generally silent about protestations and instead make efforts to demonstrate self-determination among marginalized Aboriginal peoples. Our findings challenge expectations about images of art, artists, and of people in artistic leadership roles, revealing the complexity of factors shaping Australian art worlds during a 45-year period in which cultural values regarding Aboriginal people changed dramatically.

Starting in the last quarter of the twentieth century, there has been a major shift in Australian regard for the history and culture of its original and current Aboriginal inhabitants. It was only with the 1992 Eddie Mabo court decision that Australia overturned the doctrine of terra nullius – the legal fiction that Australia was uninhabited when European explorers and settlers arrived. Among the

changes that occurred was the explosion of global interest in Australian Aboriginal art, as signaled for example by the inclusion of art by Rover Thomas and Trevor Nickols in the 1990 Venice Biennale (Belk and Groves 1999). We ask: "how has art ethnicity been presented over the past 45 years in the annual reports of Australia's national arts council?" More specifically, we ask whether the representation of Aboriginal and non-Aboriginal art became less colonial and primitivistic and more contemporary; that is, have new images of art, artists and artistic leadership emerged in the representations of images on the covers and interiors of annual reports? We also examine whether the financial support of the Australia Council for the Arts (ACA) for Aboriginal art has kept pace with the growing direct and indirect importance of Australian Aboriginal art in driving international tourism to the country as well as enriching the image of the country abroad.

We employ a qualitative semiotic analysis of images from its annual reports. In addition to this large data base, the analysis draws on interviews with key Aboriginal and non-Aboriginal members and directors of the ACA over this period. This allows us to assess the extent to which the image representations have changed over the 45 years, during which new Aboriginal art forms emerged and became recognized as 'high art' rather than 'anthropological objects.'

This study makes three contributions. First, given their potential for influence on national cultural policy, arts councils and their annual reports offer insight into evolving regard for Aboriginal Australians and Aboriginal art. Second, our study recognizes that arts councils play a key role in classifying culture. For this reason, arts council annual reports enable the analysis of long-term trends in categories of art and artists. For example, a given artist, might well wish to have her work recognized as "contemporary art" rather than "urban Aboriginal art." Third, prior studies have shown that the arts act as a means of 'soft' diplomacy and offer a way for a country to create its identity and place in the world. Images form an important part of identity creation but have been little studied within this domain. Images appear in a variety of cultural contexts in annual reports. We examine their focus on art, artists and artistic leadership. Images are narrative tools that tell stories; stories are a key means of conveying meaning in culture. While we find a growing tendency to represent Aboriginal art as sophisticated rather than as a primitive anthropological curiosity and to recognize the importance and rights of Aboriginal people over the 45 years studied, we also find a shrinking tendency to fund Aboriginal art at a level commensurate with its importance to Australian culture and economy. Thus, we conclude that neocolonialist marginalization and exploitation continue.

The Indigenous Art Market: A Site of Cultural Production or Cultural Assimilation?

EXTENDED ABSTRACT

Please be aware that this publication/resource may contain the names of Aboriginal and Torres Strait Islander people who may now be deceased.

First Nations people in Australia, Asia, the Americas, and Europe have long been affected by colonization practises of cultural assimilation into non-Indigenous cultures and even cultural annihilation. In Australia, many Indigenous people continue to struggle under contemporary forms of colonialism that deny their rights to ownership of ancestral lands and equitable access to health, education, and employment (Australian Institute of Health and Welfare 2015; Watson 2009).

Against this backdrop of historical and contemporary colonialism, this presentation explores how Indigenous artists use their art to

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1   One of the Aboriginal interviewees used these words. They reflect (i) knowledge of the retrospective exhibition of Aboriginal artist, John Mawurndjul, at the Art Gallery of South Australia, October 2018-January 2019 as part of the Tarnanthi Aboriginal arts festival, and (ii) her knowledge of the place of history and tradition for Aboriginal peoples being balanced against living in contemporary society as an urban Aboriginal person.

create and re-create Indigenous culture both for their own communities and the larger art market. Martineau and Ritskes (2014, I) argue, "[a]gainst colonial erasure, Indigenous art marks the space of a returned and enduring presence." In Figure 1, Indigenous artist Mumu Mike Williams produces art to celebrate his culture. He also sends a powerful statement about Indigenous land ownership in the APY Lands in central Australia. In describing his artwork, which was painted "illegally" on canvas Australia Post mailbags, he explains: "Pampuntja Wiya: that means don't touch! Don't touch Rockhole, don't touch our dreaming. I'm talking to politicians, to the government (Moodie 2017)."

In light of the resistive production practices of Indigenous culture-makers such as Mumu Mike Williams, we investigate the Indigenous art market as a site of cultural production and decolonization. The study is informed by postcolonial and decolonization theories that encourage the exploration of tensions between Western research and Indigenous knowledge systems (e.g., Denzin, Lincoln, and Smith 2008; Tuhiwai Smith 2012). While postcolonial theorists (e.g., Bhabha 1994; Said 1978; Spivak 1999) call for an analysis of cultural and epistemic legacies of colonialism, decolonization is an expression of "epistemic disobedience" (Mignolo 2009, 15) and de-linking from colonial thought (Mignolo 2007). Decolonization requires "re-center[ing] Indigenous land, communities and cultures" (Martineau and Ritskes 2014, II) to provide fugitive possibilities for cultural production and creative expression. Thus, this study asks: How do Indigenous artists and art intermediaries break away from the colonialism's enforced silence and revitalize fugitive Indigenous cultures through the market?

We draw on interviews with art mediators and influencers, participant observation at art exhibits, as well as an historical analysis of archival data of the Australian Indigenous art market. We analyze our data through the conceptual lens of decolonization to theorise Australian Aboriginal artists and intermediaries as resistive producers and powerful culture-makers engaging in decolonization practices that work to decouple their art and cultures from lingering colonizing structures in the marketplace. As Indigenous artist Brenda L. Croft (2008, 8) asserts, "[b]y our very existence we challenge… We are not meant to be here, we are meant to vanish, to give truth to the lie of terra nullius (i.e., uninhabited land)". Similarly, Indigenous art curator Hannah (2018, 12) in her curatorial essay states, "…the simple act of creating art, and the ways in which these artistic and cultural practices are set alongside everyday experiences, serves to embody cultural continuation. These practices enact the very same ideals that decolonization seeks to engender."

Michael, an Australian Indigenous art intermediary, describes his involvement within the art market to be "quite disruptive" as he explains: "To us, it's not about just selling the artworks, you know. That's why we hardly sell artworks, we just lease them." Leasing the artworks allows Michael to retain control of Indigenous art and cultures. It also becomes an avenue for him to inject Indigenous cultures into non-Indigenous businesses: "Whenever we're talking to clients, the leading conversation is around culture. We use artwork as a leveraging point to be able to inject and embed culture into commercial spaces such as offices … Art becomes a small window to a view of what life looks like for the others from the outside. It becomes the exposure to Aboriginal life and opportunities for other people to understand what's going on for us."

Whether it is creating art on Australia POST mailbags like Mumu Mike Williams or leasing Indigenous artworks to clients, the market can open up pathways for Indigenous people to extend their cultural influence and knowledge beyond their own communities to non-Indigenous consumption communities. Despite the cultural annihilation wrought by colonialism and the persisting cultural tensions, the market also holds a space where Indigenous people engage in decolonizing struggle to reassert their presence and the Indigenous way of life.

While past marketing studies explore the dynamics of the art markets in the USA and China (Joy and Sherry 2003, 2004), this study focuses on the Australian Indigenous art market and conceptualizes the marketplace as a fugitive space where Indigenous artists and intermediaries reassert the power of their Indigenous cultures and knowledges against colonial forces and structures. As Métis, Canada's First Nations People's activist, Mederic McDougall pointedly states, "We do not want to be integrated into a decaying white society. Why enter a house that is burning down?" (cited in Adams 1999, 74). Thus, we extend current understanding of the art market, conceptualizing it as a site with the potential to inspire and sustain Indigenous people's collective struggles for freedom, empowerment, and cultural resurgence.

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A New Look at Beauty in Consumer Decision Making

Chair: Qin Wang, Arizona State University, USA

Paper #1: When a Beautiful Service Provider Makes Mistakes: To Forgive or Not to Forgive?

Lisa C. Wan, The Chinese University of Hong Kong, Hong Kong

Robert S. Wyer, Jr., University of Cincinnati, USA

Paper #2: Creditworthiness is in the Eye of the Beholder: How Consumers' Own Attractiveness Shapes Generosity toward [Un] Attractive Microloan Borrowers

Rhiannon MacDonnell Mesler, University of Lethbridge (Calgary Campus), Canada

Ali Besharat, University of Denver, USA

Jennifer Argo, University of Alberta, Canada

Paper #3: The Beautified Me is Me: How Interdependence Increases Beauty App Use Intention

Qin Wang, Arizona State University, USA

Andrea C. Morales, Arizona State University, USA

Adriana Samper, Arizona State University, USA

Paper #4: Inspirational Aesthetics: How Beautiful Products Motivate Performance

Kelly Herd, University of Connecticut, USA

Page Moreau, University of Wisconsin, USA

SESSION OVERVIEW

"Beauty is in the eye of the beholder." Abundant research has shown that physically attractive individuals are perceived as having more socially desirable attributes (Eagly et al. 1991; Langlois et al. 2000) and gain many benefits from these positive evaluations, such as better jobs and higher wages (Hamermesh and Biddle 1994). These benefits are known as the "beauty premium" and motivate people to engage in beauty practices (i.e., applying cosmetics) to enhance their physical attractiveness. However, the degree to which the beauty premium generalizes to various consumption contexts is yet unclear and many questions remain about the factors and underlying mechanisms associated with consumption of beauty-related products. This session provides new, vital perspectives in this domain.

The first two papers explore boundary conditions on the beauty premium in two different consumption contexts: service failure and microlending. First, Wan and Wyer focus on the impact of service providers' physical attractiveness on consumers' reactions to a service failure. They show that consumers are less forgiving of an attractive (vs. average-looking) opposite-sex provider's social service failure, and this pattern is more pronounced for communal (vs. agentic) participants. However, consumers are more forgiving of an attractive (vs. average-looking) opposite-sex provider's nonsocial service failure. This effect is driven by social competence expectation violation. Next, Mesler, Besharat, and Argo shift to a microlending context and examine how consumers' own physical attractiveness and lenders' physical attractiveness interactively impact the amount lenders are willing to grant. Results suggest that unattractive (vs. attractive) lenders assign lower creditworthiness to attractive (vs. unattractive) borrowers and subsequently lend them less. Notably, this effect is mitigated when the borrowers' credit is tarnished or when the lenders are self-affirmed.

Despite the fact that beauty can lead to negative consequences, as documented above, consumers still invest great efforts into enhancing their physical attractiveness, even in virtual environments. The third paper by Wang, Morales, and Samper examines when and

why consumers use photo-editing beauty apps to make themselves look more attractive in photos. They find that interdependent (vs. independent) consumers have higher intentions to use beauty apps when seeing both the unedited and beautified photos side-by-side, because they see greater overlap between their beautified and true selves, just as they see greater overlap between themselves and other people. However, this effect is mitigated when consumers only see the beautified photo in isolation, as the discrepancy in appearance is less apparent.

Finally, Herd and Moreau conclude by exploring whether the beauty premium also applies to beautiful products. Specifically, they show that using beautiful products increases consumers' self-efficacy via an assimilation mechanism, which subsequently translates into greater motivation and better actual performance while using the product. They also show that the effect holds only when an upward comparison target is absent (vs. present).

Collectively, these four papers provide new perspectives on the role of beauty in consumer decision making. Each paper includes a complete set of experiments and provides process evidence that can stimulate new research ideas and practical insights in the domain of beautiful people and products.

When a Beautiful Service Provider Makes Mistakes: To Forgive or Not to Forgive?

EXTENDED ABSTRACT

Attractive service providers of the opposite sex typically elicit favorable consumer reactions (e.g., Ahearne, Gruen, and Jarvis 1999; Argo Dahl, and Morales 2008; Wan and Wyer 2015). In some cases, however, the physical attractiveness of service providers might *decrease* the favorableness of consumers' reactions to them. Because attractive service providers are attributed social competence (Eagly et al. 1991), they are expected to be particularly capable of delivering good service. Therefore, when this expectation is violated, consumers might relatively *less* forgiving of their mistakes.

Previous research (e.g., Chan, Wan, and Sin 2009; Grönroos 1984) has distinguished between nonsocial and social failures. A non-social failure results from the provider's incompetence (e.g., the waiter took the wrong order) but a social failure involves a violation of expectations surrounding an interaction with a provider (e.g., the waiter is impolite), independently of the provider's competence. Therefore, consumers may react less positively to a provider's social failure, but more positively to a provider's nonsocial failure, if the provider is attractive than if (s)he is less attractive.

We also suggest that agency-communion orientation would further moderate the relationship between physically attractiveness and consumer reactions to service failures. An *agentic* orientation refers to an individual's tendency to emphasize the self and its separation from others, whereas a *communal* orientation refers an individual's tendency to focus on social relations (Helgeson 1994). These differences can either be chronic or induced experimentally (Kurt, Inman, and Argo 2011), for example, males are perceived to be agentic-oriented and females are perceived to be communal-oriented. Because communal (vs. agentic) consumers are more sensitive to interpersonal interactions, their reactions to attractive and less attractive providers' mistakes might be particularly pronounced.

Four experiments confirmed these predictions. In a pilot study, males (n = 180) participated in a study of first impressions. They re-

ported higher expectations that opposite-sex service provides would be socially competent when they were physically attractive than when they were average looking (8.27 vs. 7.24, respectively; $F(1, 176) = 35.22$, $p < .001$). No difference was found in perceptions of a same-sex provider's competence, however (7.18 vs. 7.04, respectively; $F(1, 176) = 1.36$, $p > .10$).

In experiment 1, female participants (n = 128) were invited to be a mystery shopper and to visit a company's booth that was set up at their University. They were randomly assigned to cells of a 2 (salesperson attractiveness: high vs. average) × 2 (service failure type: social vs. non-social) between-subjects design. Each participant, run individually, arrived at a room that simulated a retail booth in a particular time slot. Two male confederates (age = 22) with different levels of physical attractiveness were recruited to be the salesperson. In *non-social failure* conditions, the salesperson was instructed to perform ineffectively. In *social failure* conditions, the salesperson was trained to give limited eye contact, did not smile, and looked unfriendly during the interaction with participants. Analyses of dissatisfaction yielded an interaction of service failure type and attractiveness ($F(1, 124) = 26.68$, $p < .001$). In nonsocial failure conditions, participants were *less* dissatisfied if the salesperson was attractive than if he was average looking (5.63 and 6.81, respectively; ($F(1, 124) = 31.46$, $p < .001$). In *social failure* conditions, however, the pattern reversed (7.95 and 6.94, respectively; ($F(1, 124) = 23.23$, $p < .001$). Mediation analysis confirmed (Model 8, Hayes 2013) that the interactive effects of attractiveness and service failure type on dissatisfaction were mediated by their effects on social competence expectation violation (based on 5000 samples, 95% CI ranged from .0802 to 1.1710).

Experiment 2 examined the moderating role of agency-communion orientation and used gender as a proxy for the agency-communion orientation. Two hundred eighty-eight participants (50 % males) were randomly assigned to conditions of a 2 (service provider attractiveness: high vs. average) × 2 (orientation: agency vs. communion) × 2 (service failure type: social vs. non-social) between-subjects design. They imagined themselves shopping for a smartwatch. In *non-social failure* conditions, they imagined requesting a specific smartwatch with a fitness tracker and GPS function, but the salesperson gave them a watch of the wrong color and no GPS. In *social failure* conditions, participants imagined that the salesperson did not smile to them and gave them limited eye contact when they made the same request. As predicted, the three-way interaction involving agency-communion orientation, service failure type and attractiveness was significant ($F(1, 280) = 5.39$, $p < .05$, $\eta_p^2 = .02$). This interaction is attributable to the fact that the effect of physical attractiveness under the nonsocial failure and social failure was more pronounced for communal participants ($M_{diff} = 1.64$ vs. -1.14, respectively; $F(1, 280) = 41.48$, $p < .001$) than for agentic participants ($M_{diff} = 0.61$ vs. -0.75, respectively; $F(1, 280) = 9.93$, $p < .01$). Put another way, the interactive effects of physical attractiveness and agency-communion orientation were restricted to social failure conditions ($F(1, 280) = 10.01$, $p < .01$). The corresponding interaction in the non-social failure conditions was not reliable ($F < 1$).

Experiment 3 (n = 304) used a scrambled-sentence task as a priming task to induce differences in agency-communion orientation (Kurt, et al. 2011) and it replicated the findings of experiment 2. It also confirmed the mediating influence (Model 12, Hayes 2013) of social competence expectation violations on the interactive effects of attractiveness, service failure type, and agency-communion orientation on dissatisfaction (based on 5000 bootstrapping samples, the 95% CI ranged from .1289 to 1.0501).

The present research demonstrates that although consumers react more positively to attractive (vs. average looking) opposite-sex service providers when they commit a non-social failure, they react more *negatively* to them when they violate expectations for social competence. This pattern is stronger for consumers with a communal (vs. agentic) orientation. It is the first to identify conditions in which the physical attractiveness of a service provider can decrease the favorableness of consumers' reactions to the provider rather than increasing it in service failures. These findings offer valuable managerial insights into the role of service providers' physical attractiveness on consumers' behavior.

Creditworthiness is in the Eye of the Beholder: How Consumers' Own Attractiveness Shapes Generosity toward [Un]Attractive Microloan Borrowers

EXTENDED ABSTRACT

When your only hope for business funding is a loan from strangers, is being beautiful better? Although attractive individuals are ascribed more positive attributes (Eagly et al. 1991) and outcomes (Antonakis and Dalgas 2009), boundary conditions on this beauty-is-good effect are emerging (Argo and Dahl 2018). Herein, five experiments demonstrate that lenders' own attractiveness moderates the effect of a microloan recipient's attractiveness on lending. First, we show that lenders who self-report as (study 1a), are rated by others as (study 1b), or are manipulated to feel (study 1c) less attractive derogate an attractive borrower through their creditworthiness, and in turn lend less. Study 2 examines this implicit threat mitigation by manipulating borrower creditworthiness; unattractive lenders become more generous toward attractive borrowers when the threat of a borrowers' attractiveness is mitigated by low credit. Finally, when unattractive consumers' threat is mitigated through self-affirmation (study 3), their generosity toward attractive borrowers is enhanced.

Studies 1a-1c.

Studies 1a-1c utilize a borrower attractiveness (high vs. low vs. control, study 1a; high vs. low in studies 1b and 1c) by lender attractiveness (self-reported, study 1a; other-rated, study 1b, and manipulated via false positive/negative feedback, study 1c) designs among MTurkers (n=219 in study 1a; n=346 in study 1c) and undergraduates (n=457, study 1b). All participants were provided with an overview of microlending followed by an advertisement featuring a borrower, then rated the creditworthiness of that borrower (3 items; alpha=.91), then indicated the percentage of their payment (studies 1a, 1c) or dollars (study 1b) they would lend. In study 1c, participants also completed situational self-esteem (from Rosenberg 1965). Finally, respondents completed a manipulation check and demographics.

Study 1a Results

Using PROCESS model 9 (Hayes 2018), the borrower attractiveness and lender attractiveness interaction predicting creditworthiness was significant (b=.27; t(1,213)=2.66, $p<.05$); creditworthiness also predicted payment (b=.56; t(1,213)=6.59, $p <.001$). Among attractive borrowers, creditworthiness significantly mediated the relationship between lender attractiveness and amount loaned (b=5.19; CI=1.88 to 11.04). However, the impact of lender attractiveness on amount loaned through creditworthiness became non-significant when the borrower was unattractive (b=1.34; CI=-.76 to 3.02). Thus, consumer lending behavior is subject to the borrower's attractiveness and the lender's self-reported attractiveness. Unattractive lenders responded to attractive borrowers by evaluating them as less creditworthy, and in turn lending less money. However, attractive lenders

did not differ in their creditworthiness assessment and subsequent generosity toward any borrower, irrespective of their attractiveness.

Study 1b Results

Using model 7, we find a significant interaction between borrower attractiveness and lender objective attractiveness on creditworthiness (b=.79; t(1,225)=3.99, *p*<.001), and creditworthiness also predicted payment (b=7.98; t(1,226)= 3.39, *p*<.001). When the borrower is attractive, creditworthiness significantly mediated the relationship between lender objective attractiveness on the amount loaned (b=6.39; CI=2.41 to 12.36) but not when the borrower was unattractive (b=.10; CI=-2.52 to 2.37). Importantly, the use of other-rated attractiveness suggests the threat effect observed is not due to self-esteem; however, this is further ruled out in study 1c.

Study 1c Results

Again using PROCESS model 7, the interaction of borrower attractiveness and lender attractiveness predicting creditworthiness was significant (t(1,358)=-2.31, *p*=.02), and creditworthiness also significantly predicted lending behavior (t(1,359)=3.27, *p*=.001). The pathway from lender attractiveness to payment lent through creditworthiness did not include zero for unattractive borrowers (CI=.07 to 1.94), or attractive borrowers (CI=-4.86 to -.06). Consumers who were primed to feel unattractive assigned lower (higher) creditworthiness to the attractive borrowers, which in turn reduced the amount of money they were willing to lend. In contrast, self-esteem did not mediate the moderation effect (PROCESS model 7; CI=-.37 to 1.19). Next study provides further evidence of the underlying mechanism by manipulating borrower creditworthiness.

Study 2

MTurkers (n=201) participated in a 2(Borrower Attractiveness: attractive vs. unattractive) x 2(Borrower Creditworthiness: low [2-star] vs. high [5-star]) between-subjects design within lenders who were primed to feel unattractive. We used the false photo-feedback manipulation and data collection procedure used in study 1c. Using model 1, the interaction between creditworthiness and borrower attractiveness on lending was significant (t(1,197)=-2.37, *p*<.05). Under high creditworthiness, attractive borrowers received significantly less money from unattractive lenders than did unattractive borrowers (F(1,197)=8.37, *p*<.05). However, this difference disappeared under low borrower creditworthiness (F(1,197)=.34, *p*>.05). Thus, highlighting creditworthiness advantaged attractive borrowers (to unattractive lenders), and improved lending when the attractive borrowers had low credit. In study 3, we assess a second way to mitigate the threat posed by attractive borrowers, by utilizing an affirmation task.

Study 3

Prolific Academic panelists (n=177) participated in a 2(Borrower Attractiveness: Attractive vs. Unattractive) x 2(Lender Self-Affirmation: Yes vs. No) between-subjects design within unattractively primed lenders. Participants were randomly assigned to receive either a self-affirmation or a filler task (White, Simpson and Argo 2014). Participants then viewed an ad containing either an attractive or unattractive borrower (Gonzalez and Loureiro 2014). Finally, participants indicated the percentage of their compensation they would lend. Model 1 revealed a significant interaction between borrower attractiveness and self-affirmation (t(1,173)=2.42, *p*<.05). In the no-affirmation condition, unattractive lenders were again significantly less likely to lend money to the attractive (vs. unattractive) borrower (F(1, 173)=8.98, *p*<.05); unattractive lenders did not differ in lending to the attractive (vs. unattractive) borrower when they received

an affirmation (F(1,173)=.13, *p*>.05). Thus, threat management was mitigated when an unattractive lender was given a self-affirmation.

Discussion. Across 5 studies, while being more attractive is better in achieving funding, this effect depends on the attractiveness of the lender. Less attractive consumers loaned significantly less to attractive borrowers after attenuating borrower creditworthiness appraisals (studies 1a-1c). When this implicit threat was mitigated by tarnishing the borrower's credit (study 2) or affirming the unattractive lender (study 3), generosity to an attractive borrower was heightened. We add to the literature on attractiveness, finding that even individuals a world away and in need of help can initiate a substantive threat response in consumers. As half of all consumers are below the mean on attractiveness, and conventional wisdom suggests the importance of "looking your best", our findings are also instructive for microloan borrowers, administrators and platforms.

The Beautified Me is Me: How Interdependence Increases Beauty App Use Intention

EXTENDED ABSTRACT

In the digital age, the availability of powerful, simple-to-use photo-editing apps, such as Beauty Plus and Facetune, means that the creation of visually compelling photographs is growing at an incredible speed (Nightingale, Wade, and Watson 2017). These tools provide consumers with a myriad of options, such as removing wrinkles and reshaping the face, to make themselves look better than they really do. Previous research has shown consumers desire to project true and authentic selves (Sheldon et al. 1997; Wood et al. 2008). However, the increasing number of manipulated photographs on social media reveals that many consumers also choose to present less authentic or even "fake" selves (Nightingale et al. 2017). This research tries to address why consumers use beauty apps to enhance their physical attractiveness in photos and which consumers are more likely to do so.

Across five studies, we demonstrate that consumers' intentions to use beauty apps depend on the overlap they see between their ideal (beautified) and true selves, which is influenced by how they construe their sense of self and the evaluation mode they are in when they see the photos. Specifically, when in a joint evaluation mode (i.e., consumers see both the unedited and beautified photos side-by-side), interdependents (vs. independents) tend to see greater overlap between their beautified and true selves, just as they see greater overlap between themselves and other people, and thus have higher intentions to use beauty apps to edit their photographs. However, interdependents (vs. independents) are equally likely to use beauty apps when in a separate evaluation mode (i.e., only see the beautified photo).

Experiment 1 provides initial evidence that interdependents (vs. independents) have higher intentions to use beauty apps when in a joint evaluation mode. We first primed self-construal using a writing task about similarities with or differences from close friends and families (Lalwani and Shavitt 2009). Afterwards, participants read an ad for a beauty app with both an unedited face and a beautified face of the same model, which is similar to most of the real beauty app ads. Then participants rated their app use intention and the overlap between their beautified and true selves if they used the app to beautify their selfie. A one-way ANOVA on the beauty app use intention indicated that participants primed with interdependence were marginally more willing to use the app than those primed with independence (F(1,144) = 3.75, p = .055). The same effect was found for self-overlap (F(1,144) = 4.38, p < .05). Mediation analysis (Model 4, Hayes 2013) indicated that self-overlap mediated the effect of

self-construal on beauty app use intention (CI$_{95}$: .0298, .9341). The greater overlap consumers see between their beautified and the true selves, the higher intentions they have to use beauty apps.

Experiment 2 further tested the effect by measuring self-construal (Singelis 1994) and showed that the effect was mitigated when consumers were in a separate evaluation mode (i.e., only see the beautified photo). A regression analysis revealed the predicted 2 (evaluation mode: separate vs. joint) × continuous (self-construal) interaction ($t(254) = 2.00$, $p < .05$). Under joint evaluation mode, interdependents were more willing to use beauty app than independents ($t(254) = 2.70$, $p < .01$). However, there was no such effect when participants were under separate evaluation mode ($t(254) = -.01$, *ns*). The same effects were found on preference for sharing the beautified photo and self-overlap. Consistent with our theorizing, moderated mediation analysis (Model 7, Hayes 2013) revealed that self-overlap mediated the effect (CI$_{95}$: .1253, .6483). This study also ruled out social norms as an alternative explanation. Experiment 3 replicated the findings of Experiment 2 by priming self-construal.

Experiment 4 tested whether our effects would also hold when consumers took photos of themselves in real time in the lab. We measured self-construal and asked participants to try using the Beauty Plus app on a Samsung phone in the lab to take a beautified selfie. Afterwards, we either showed them only the beautified selfie or both the original and beautified selfies. A regression analysis on Beauty Plus use intention revealed the predicted 2 (evaluation mode: separate vs. joint) × continuous (self-construal) interaction ($t(193) = 2.08$, $p < .05$). When seeing both the original and beautified selfies, interdependents were marginally more willing to use Beauty Plus than independents ($t(193) = 1.91$, $p = .058$). In contrast, there was no such effect when participants only saw the beautified selfie ($t(193) = -1.06$, *ns*). Again, we found the same effect on self-overlap and demonstrated its mediating role.

Experiment 5 further tested the mediating role of self-overlap by manipulating it. After completing the self-construal measure, participants were randomly assigned to either the self-overlap attenuation condition in which they read a research article showing that engaging in beauty work can be viewed as disguising one's true self or the control condition in which they read a research article showing that engaging in beauty work is widely accepted in society. Afterwards, all the participants read the same beauty app ad as in Experiment 1 (joint evaluation). Results revealed a significant 2 (self-overlap attenuation vs. control) × continuous (self-construal) interaction ($t(207) = -2.12$, $p < .05$) on beauty app use intention. In the control condition, interdependents were more willing to use the beauty app than independents ($t(207) = 3.05$, $p < .01$). In contrast, there was no such effect when participants were in the self-overlap attenuation condition ($t(207) = -.14$, *ns*).

In sum, this research not only provides insight into which consumers are more likely to use beauty apps and why, but at the theoretical level it shows for the first time that interdependents not only see greater overlap between themselves and significant others (Markus and Kitayama 1991), but also see greater overlap between their own different selves (true vs. ideal self).

Inspirational Aesthetics: How Beautiful Products Motivate Performance

EXTENDED ABSTRACT

In their influential paper, Hamermesh and Biddle (1994) identified a beauty premium in which beautiful people earned 4.8% more in the marketplace as compared to their less attractive counterparts. The premium is attributed to the "what is beautiful is good" effect:

the phenomenon that physically attractive people are believed to have a wide array of positive personal traits, including intelligence, health, and competence (Dion, Berscheid, and Walster 1972). As with people, these aesthetic variations may or may not reflect real differences in a product's ability to perform. In our research, we control for a product's real ability to perform (i.e., its functionality) and focus on understanding how differences in product attractiveness influence users' self-efficacy, motivation, and actual task performance.

In the first two studies, we find that when individuals partner with beautiful products to complete a task, they essentially "bask in the glory" of these objects, assimilating toward them and reaping positive benefits from the collaboration (e.g., Cialdini et al. 1976). This effect is due, at least in part, to individuals' tendencies to look to these objects as partners and assimilate toward them as they might when collaborating with successful teammates (e.g., Greenberg et al. 2008). Individuals are more likely to look toward objects as social entities—whether consciously or unconsciously—when they are alone (Epley, Waytz, and Cacioppo 2007). Hence, in our third study we manipulate the presence of another collaborative and upward social comparison target during the task.

In study 1, participants were randomly assigned to either a more attractive 5 lb. weight, a less attractive 5 lb. weight, or both weights (choice condition). Participants were then asked to complete a set of basic weight exercises using the assigned or chosen weight. As with all of our studies' stimuli, pretests showed that the attractive weight was judged to be more attractive, but equally functional. Self-efficacy was measured with three 7-point items (e.g., "I was self-assured of my ability to complete this exercise successfully"; α = .82; Bandura 2006).

As predicted, a one-way ANCOVA controlling for mood and gender revealed a positive effect of product attractiveness ($F(1,124) = 3.32$, $p < .05$). As predicted, participants in the more attractive and choice conditions reported higher self-efficacy than those in the less attractive condition (both p's $< .05$). There was no significant difference between those in the choice and in the attractive conditions ($p > .8$), suggesting usage alone is sufficient for the effect to occur.

In our second study, participants were assigned to use either the more or less attractive weight and to complete the same task. Self-efficacy was measured as in study 1 and motivation was measured with four items (e.g., "These materials motivated me to exercise"; α = .72). The ANCOVA, controlling for gender and hedonic responses, revealed a positive effect of product attractiveness on both self-efficacy ($F(1,106) = 4.43$, $p < .05$) and motivation ($F(1,106) = 3.59$, $p = .06$). Mediation analyses indicated a significant indirect (i.e., mediation) effect of self-efficacy on the relationship between product attractiveness and motivation (bias-corrected 95% CI = [.0196, .3785]; Hayes 2012). The more attractive products increased self-efficacy, which translated into greater motivation. In the remaining studies, we focused on motivation and task performance as our primary dependent variables.

In our third study, we manipulated product attractiveness (more attractive vs. less attractive) and introduced a moderator: the availability of an upward comparison target. All participants completed this task in lab workstations using functionally equivalent and more (vs. less) attractive materials (e.g., cutting board, utensils, bowls) to cook a spring roll. Participants in the *upward comparison target present* condition were told to imagine that they were cooking in the presence of a member of a cookbook publishing company. Those in the *upward comparison target absent* condition were told to imagine themselves in a private space with no one else present. We predicted that when no upward comparison target is salient (as in studies 1 and 2), participants will report greater motivation (measured with the

same four items as in study 2; α = .71). However, when a social comparison target is salient, the effect will be attenuated. As predicted, we found a significant interaction of the two factors on motivation ($F(1,194) = 5.97$, $p < .05$). When no human social comparison target was made salient, there was a significant positive effect of attractiveness on motivation ($p < .01$), but the effect was non-significant when the social comparison target was present.

In our final study, all participants were randomly assigned to a cooking workstation which included all the ingredients, materials and relevant tools needed to make a fruit kebob. The ingredients were identical across conditions and the materials were pretested to be either more or less attractive. After the study, photographs of the kebobs were randomized and distributed to ten judges (blind to condition) who evaluated the outcomes (i.e., how appealing, well-made, and delicious it looked; all α's > .85). A one-way ANCOVA, controlling for gender and the hedonic responses, revealed a main effect of product attractiveness ($F(1,119) = 6.37$, $p < .05$). Kebobs produced using more attractive products were judged to be better than those produced using the less attractive products. While our earlier studies demonstrate the benefits of attractive products on consumers' self-efficacy and task motivation, this final study shows that they not only feel more competent and motivated, but actually perform better when using more attractive, but functionally equivalent, materials.

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Exploring Anthropomorphism Through the Lens of Agency and Communion

Chair: Linyun W. Yang, University of South Carolina, USA

Paper #1: When the Flu Speaks: The Effect of Disease Anthropomorphism on Protection Motivation

Lili Wang, ZheJiang University, China
Rima Touré-Tillery, Northwestern University, USA
Ann L. McGill, University of Chicago, USA

Paper #2: Products are People Too! Making Taboo Trade-Offs with Anthropomorphized Products

Jing Wan, University of Groningen, The Netherlands
Pankaj Aggarwal, University of Toronto, Canada

Paper #3: Greater Expectations: Anthropomorphic Products Must Be Warm and Competent...Or Else

Jenny G. Olson, Indiana University, USA
James A. Mourey, DePaul University, USA

Paper #4: Is Male the Default Gender? The Distinctive Effects Anthropomorphizing Products as Male versus Female

Linyun W. Yang, University of South Carolina, USA
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SESSION OVERVIEW

The phenomenon of anthropomorphism is a rich and nuanced area of research that has captivated the attention of many researchers in recent years (Aggarwal & McGill 2017). This session focuses on answering the question: How does attributing physical and mental human characteristics to nonhuman entities shape consumers' understanding of and interactions with these entities? In the same way that they perceive other people, consumers are interested in assessing the intentions of an anthropomorphized entity and its ability to carry out those intentions, which correspond to communion and agency, respectively (Fiske et al. 2007). More specifically, communion relates to relationship building and social functioning (e.g., warmth, kindness) while agency relates to goal-achievement and task-functioning (e.g., competence, assertiveness; Abele & Wojciszke 2014). This session features four papers that study anthropomorphism from the perspective of agency and communion using different approaches.

First, Wang, Touré-Tillery, and McGill demonstrate that anthropomorphizing a disease highlights the disease's agency and reduces the psychological distance between the self and the disease. Consequently, consumers feel greater vulnerability and need to protect themselves from this ill-intentioned adversary. Next, Wan and Aggarwal highlight the importance of communion when they show that consumers rely on social norms when assessing anthropomorphized products, such that they choose to uphold sacred 'moral' values that dictate how living beings should be treated – even at a monetary cost to themselves.

The next two papers examine issues that affect both fundamental dimensions simultaneously. Olson and Mourey show that consumers expect anthropomorphized assistants (e.g., Alexa) to be high in both communion (like humans) and agency (like machines), making consumers less tolerant of poor performance from anthropomorphized assistants versus non-anthropomorphic or human assistants. Finally, Yang and Aggarwal demonstrate that anthropomorphism activates gender biases usually reserved for humans, such that products anthropomorphized are expected to be communal while product anthropomorphized as male are expected to be agentic.

Each paper in this session also incorporates in its own way this year's conference theme of "Becoming Wise." By integrating the theories of protection motivation (Wang et al.) and taboo trade-offs

(Wan & Aggarwal), these papers expand wisdom by applying well-established psychological theories to understand important consumer contexts. Olson and Mourey demonstrate that new technology like digital assistants embody both human and machine-like qualities and are therefore perceived differently from more traditional sources of information. Finally, Yang and Aggarwal document our collective wisdom about anthropomorphism through the lens of gender to stimulate future extensions and theory development in this area.

Reflecting anthropomorphism's pervasiveness in human judgment, various cultures, and all aspects of life (Aggarwal & McGill 2017), the papers in this session examine a broad range of contexts and demonstrates important implications for whether consumers believe nonhuman entities wish to inflict harm, deserve care and consideration, are responsible for their actions, and possess specific human traits. Therefore, this session will also appeal to researchers working in areas beyond anthropomorphism, including those interested in health behaviors, artificial intelligence, morality, and gender.

When the Flu Speaks: The Effect of Disease Anthropomorphism on Protection Motivation

EXTENDED ABSTRACT

Communicators and consumers alike routinely anthropomorphize diseases and health concerns. Does thinking about a disease or health trouble in human terms—rather than in object terms—influence consumers' judgments and behaviors with respect to that disease? This question is important because global and national public health organizations devote substantial resources to informing people about preventable risk factors—including tobacco use, unhealthy diets, and low physical activity—that lead to many deadly diseases. For example, in 2017, the Center for Disease Control and Prevention had a budget of about $12 billion devoted to critical science research as well as the dissemination of health information. Furthermore, the US government spent $13 million on anti-smoking ads in 2010 (Creamer 2012). Despite these efforts, getting the public to comply with health recommendations can be challenging.

The present research explores the effect of anthropomorphizing diseases on consumers' compliance with health recommendation. Theories of anthropomorphism advance that one reason people anthropomorphize non-human entities is to gain a better understanding by conceiving of them in terms of the more familiar human schema (Epley et al. 2007; Epley, Akalis, et al. 2008; Epley, Waytz, et al. 2008). Thus, people treat and respond to anthropomorphized objects in ways that mirror their responses to comparable persons in the same context (Ahn, Kim, and Aggarwal 2014; Aggarwal and McGill 2007; Landwehr, McGill, and Herrmann 2011; Tam et al. 2013; Wan et al. 2017). We hypothesized that by making a negative object such as a disease more agentic and by reducing the psychological distance between the self and the disease, anthropomorphizing a disease will increase people's sense of being at its mercy; that is, anthropomorphism will increase their perceptions that they are vulnerable to the disease. In turn, protection motivation increases as perceptions of vulnerability increase (Floyd and Prentice-Dunn 2000; Helmes 2002; Leventhal and Watt 1966; Milne et al. 2000; Rippetoe and Rogers 1987).

Study 1 tested the correlation between anthropomorphism and protection motivation. In the middle of flu season, we assessed undergraduate students' (N = 200) general tendency to anthropomor-

phize, using the Individual Differences in Anthropomorphism Questionnaire (Waytz et al. 2010), and then we asked them to indicate whether they got a flu shot. We found a positive relationship between participants' tendency to anthropomorphize and their likelihood to have taken steps to protect themselves from the flu ($\beta = .47$; $\chi^2(1) = 20.35$, $p < .001$).

Study 2 tested the mediating roles of psychological distance and perceived vulnerability. Female MBA students (N = 159) read a paragraph about breast cancer, in which the disease either "talked" about itself in the first person or was discussed in object terms (Puzakova et al.2013; Touré-Tillery and McGill 2015). Then they indicated their likelihood to take preventive steps against this disease, and the extent to which they felt close to and vulnerable to the disease. We found participants who thought of breast cancer in anthropomorphized (vs. object) terms felt closer to ($M_{anthro} = 3.35$, $SD = 1.35$; $M_{object} = 2.80$, $SD = 1.28$, $t(157) = 2.60$, $p = .010$) and more vulnerable to the disease ($M_{anthro} = 3.58$, $SD = 1.19$; $M_{object} = 3.15$, $SD = 1.05$, $t(157) = 2.45$, $p = .016$), and hence were more motivated to protect themselves from it (sequential mediation) ($M_{anthro} = 5.02$, $SD = 1.37$; $M_{object} = 4.55$, $SD = 1.33$, $t(157) = 2.18$, $p = .031$). Post study showed disease anthropomorphism did not influence measures of affect (positive affect: $M_{anthro} = 3.24$, $SD = 1.13$; $M_{object} = 3.50$, $SD = 1.10$, $t(140) = 1.40$, $p = .165$; negative affect: $M_{anthro} = 3.32$, $SD = 1.23$; $M_{object} = 3.43$, $SD = 1.32$, $t(140) = .53$, $p = .597$) and global evaluations of the disease ($M_{anthro} = 5.35$, $SD = 1.08$; $M_{object} = 3.35$, $SD = 1.16$, $t(140) = .03$, $p = .973$).

The next two studies tested the moderating role of high and low perceived vulnerability (respectively) on the effect of disease anthropomorphism on protection motivation. In study 3, we operationalized high vulnerability by giving participants (false) personalized information about their high risk of high blood pressure. Participants without blood pressure issues (N = 305) were recruited on Prolific Academic to read a paragraph about high blood pressure (HBP) describing the disease in human or object terms. Depending on the condition, participants received additional information about their own high risk of high blood pressure (high-vulnerability condition) or no such information (control condition). They then indicated their intention to follow the recommendations provided in the message to prevent high blood pressure. We replicated the effect of disease anthropomorphism on protection motivation in the control condition ($M_{anthro} = 5.24$, $SD = 1.14$; $M_{object} = 4.77$, $SD = 1.26$, $t(301) = 2.46$, $p = .014$), but not in the high-vulnerability condition($M_{anthro} = 4.90$, $SD = 1.03$; $M_{object} = 4.97$, $SD = 1.17$; $t(301) = -.36$, $p = .718$).

In study 4, we operationalized low vulnerability by giving participants (false) feedback about the strength of their immune systems. Undergraduate students (N = 300) first completed a health and wellness survey and learned that they had either a strong immune system (low vulnerability) or an average immune system (control). They next read a brief message about Strep E (a fictitious disease), describing the disease in human or object terms, and then they answered questions assessing their protection motivation. We replicated the effect of disease anthropomorphism on protection motivation in the control ($M_{anthropomorphized-disease} = 5.29$, $SD = 2.03$; $M_{object-disease} = 4.35$, $SD = 2.12$; $t(296) = 2.69$, $p = .008$), but not in the low-vulnerability condition($M_{anthro} = 4.63$, $SD = 2.15$; $M_{object} = 4.60$, $SD = 2.04$; $t(296) = -.08$, $p = .936$).

Taken together, these studies show people are more motivated to protect themselves from an anthropomorphized (vs. object) disease, because they feel psychologically closer and more vulnerable to the disease. Our research contributes to theory and practice in the areas of protection motivation and health communication by identifying a novel factor that increases protection motivation by increasing perceptions of vulnerability: disease anthropomorphism.

Products are People Too! Making Taboo Trade-Offs with Anthropomorphized Products

EXTENDED ABSTRACT

Anthropomorphism is the tendency to attribute human traits to nonhuman entities. For example, people often name their cars and talk to their computers or phones as if these machines are living beings. Past research has shown that consumers (mis)apply human norms when interacting with anthropomorphized products. For example, since it is inappropriate to assess people on their functional value, consumers are less willing to replace their old cars if these cars are anthropomorphized (Chandler and Schwarz 2010). People also show greater likelihood to help an anthropomorphized social cause because it is inappropriate to not help a human being who is in need (Ahn et al. 2014).

Economic exchange is an integral part of marketplace settings—product attributes are routinely traded off for money. Consumers often look for the best deals and try to get more "bang for their buck." However, we argue that consumers may not have this "commercial" mindset when it comes to anthropomorphized products. Past research finds that the exchange of human values for money is morally repugnant (e.g., selling organs for money; Tetlock 2003). Some values are seen as sacred (love, loyalty) whereas others are more secular (money)—people find trade-offs between sacred and secular values to be aversive. In fact, even buying or selling products associated with people who have special relational significance can be discomfiting (McGraw and Tetlock 2005).

While products are typically bought and sold with money, we posit that endowing a product with humanness may replace marketplace exchange norms with social relational norms. As such, consumers may forgo monetary gains in order to avoid making aversive trade-offs. Across four studies, we show that consumers are willing to sell at lower prices and buy at higher prices because thinking about monetary value feels "wrong" when it comes to buying and selling anthropomorphized products.

Study 1 takes the context of saving money by replacing an old product rather than repairing it. Participants imagined owning a wrist watch; half of the participants wrote about the watch coming to life (anthropomorphized) and the other half wrote about the watch as a mechanical object (objectified). They were then informed that the watch, while under warranty, developed a mechanical issue, and they had two options: 1) replace the broken watch with a similar new one at no cost, or 2) pay a shipping fee and send the watch in for repairs at no additional cost. Participants preferred to repair the watch when it was anthropomorphized than if it was objectified ($M_{anthro} = 4.41$, $M_{object} = 3.66$; $F(1, 176) = 4.10$, $p = .04$).

Study 2 takes the context of getting a higher price for selling a product that would be broken down and used for parts. Participants imagined owning an old car, which they wanted to sell. The car was either described in anthropomorphized terms or not. Participants received two offers: one was from an end user (a student) who wanted to use the car as is; the other from the owner of a salvage yard who was looking to buy a car to use for parts. The yard owner offered more money than the student. Participants then indicated their preference between the two potential buyers. Participants were less willing to sell the car to the salvage yard if it was anthropomorphized than if it was objectified ($M_{anthro} = 1.57$, $M_{object} = 2.15$; $F(1, 139) = 4.26$, $p = .04$).

Study 3 takes the context of buying products to examine if haggling on the price of a humanized product would feel inappropriate. Participants were shown a Facebook Marketplace post where a used sofa was listed for sale: the sofa was either anthropomorphized or

not. Participants indicated the extent to which they would be willing to pay the asking price rather than negotiate for a lower price. They also indicated if they felt that it was appropriate to negotiate on the price of the sofa. Participants who saw the anthropomorphized sofa reported greater willingness to pay the asking price compared with those who saw the objectified sofa (M_{anthro}=5.19, M_{object}=4.43; $F(1, 148)$=8.70, $p<.01$), and this effect was mediated by a decrease in perceived appropriateness in offering a lower price (95%, CI [.17, .76]).

Thinking about the humanness of objects triggers concerns about social norms and the "right" way to treat these objects. In the absence of humanization, objects can also take on emotional significance when consumers consider whom they obtained the object from (McGraw and Tetlock 2005). We posit that asking participants to focus on their feelings toward an objectifed product will lead them to react similarly to participants who anthropomorphize the product. As such, Study 4 uses a 2 (mindset: thinking vs. feeling) x 2 (product: anthropomorphized vs. objectified) between-subjects design. Half the participants were told to base their decisions on their gut feelings, while the other half were instructed to base their decisions on their rational thoughts. All participants imagined that they wanted to sell a dining set. They posted an ad that either described the dining set as a "family" (anthropomorphized) or as a regular furniture set (objectified). They receive two offers: One buyer offers a lower price for the full set, and the other buyer offers a higher price but wants only part of the dining set. Results revealed a significant interaction on choice of buyer, b=1.25, SE=.52, Wald=5.87, p=.02. When in the thinking mindset, participants with the anthropomorphized dining set were more likely to accept the lower offer in order to keep the "family unit" intact (23%) than those with the objectified set (11%). In contrast, when in the feeling mindset, there was no difference in choice of buyer between the anthropomorphized (23%) and objectified (29%) conditions.

This research contributes to prior literature on taboo trade-offs by showing a surprising context where people avoid trading-off sacred values with secular values. This research advances our understanding of how consumers interact with anthropomorphized products in seemingly irrational ways. Importantly, this research contributes to anthropomorphism research in a fundamental way by demonstrating what it means to be buying and selling humanized products, even if it is in the context of market-driven commercial products.

Greater Expectations: Anthropomorphic Products Must Be Warm *and* Competent...Or Else

EXTENDED ABSTRACT

Anthropomorphic consumer products (i.e., those that incorporate humanlike characteristics) have become increasingly popular. From digital personal assistants like Apple's Siri to integrated, all-in-one media hubs like Amazon's Alexa, consumers rely on humanlike products to provide news, traffic, and weather forecasts. However, sometimes their information turns out to be wrong. The current research examines how consumers respond to accurate and (more importantly) inaccurate information from different sources. Specifically, how might poor performance influence consumers' willingness to rely on anthropomorphic sources in the future?

Humans have incorporated anthropomorphic features into consumer products since behavioral modernity (Trinkaus 2005), but only recently have researchers started studying the psychological consequences of engaging with anthropomorphic products. For instance, previous research reveals that anthropomorphism is associated with favorable product evaluations, moral concern, and trust (e.g., Aggarwal and McGill 2007; Touré-Tillery and McGill 2015). As products become more humanlike, the line between consumer-product engagement and human engagement has blurred. Indeed, recent work reveals that anthropomorphic products can (at least partially) satisfy individuals' needs for social assurance, potentially at the cost of genuine interpersonal interaction (Mourey, Olson, and Yoon 2017).

Although Alexa is not equivalent to a human being, consumers might apply the "universal dimensions" of social perception to non-human sources (Fiske et al. 1999, 2002). Namely, consumers may perceive anthropomorphic products as varying in warmth (friendliness, good intentions) and competence (efficiency, ability), comparable to the way they perceive fellow humans. If so, these perceptions might have implications for performance expectations and subsequent support when these sources provide information.

We examine these propositions by comparing three information sources: anthropomorphic forecasters, non-anthropomorphic forecasters, and human forecasters. When these sources provide accurate forecasts, we anticipate similar levels of consumer support; however, when these sources provide inaccurate forecasts, we anticipate differential consumer support. We propose that anthropomorphic forecasters will be seen as both warm (Alexa=human) and competent (machine=precision). As a result, they elicit the strongest expectations from consumers and suffer the most from poor performance. Conversely, human forecasters may be seen as more warm than competent (i.e., lower performance expectations), meaning they should be more easily forgiven following an inaccurate forecast. Non-anthropomorphic forecasters, seen as more competent than warm, may elicit greater expectations than humans (i.e., they benefit from a machine's precision) but not as high as anthropomorphic forecasters (i.e., they still lack warmth). Although expectations may be greatest for anthropomorphic devices, consumers do not uniquely reward them following accurate forecasts; instead, poor performance is punished, relative to human and non-anthropomorphic sources. We provide support for these predictions in a series of five studies.

We began with a pilot study in the domain of weather forecasts. Participants (N=423) were randomly assigned to evaluate one of three information sources: Amazon's Alexa (anthropomorphic), a weather app (non-anthropomorphic), or a meteorologist (human). Dependent measures included perceived accuracy, expected accuracy, and the permissible margin of error. Consistent with predictions, participants had the greatest expectations for Alexa relative to the weather app or human forecasters (p's<.05). Participants were also less tolerant of mistakes from Alexa relative to the other two sources (p's<.06).

Study 1 featured the same three information sources, but this time we manipulated accuracy directly. Specifically, participants (N=300) read that the source was either "performing as expected at 85%" or "performing below expectations at 40%." Results revealed similar levels of consumer support (i.e., trust, willingness to use in the future) across the three sources when it was performing as expected (p's>.55). However, when the source performed below expectations, participants were less supportive of Alexa relative to the app and the meteorologist (p's<.01).

Study 2 provided a conceptual replication of Study 1 using a traffic context. The design was identical, but this time we added exploratory warmth and competency measures. Participants (N=300) expressed similar levels of support when the source performed as expected (p's>.47), but poor performance significantly impaired Alexa relative to the traffic app and human traffic forecaster (p's<.01). Subsequent analyses revealed that (regardless of performance) humans were perceived as relatively more warm than competent (p<.001),

the app was relatively more competent than warm ($p<.001$), and Alexa was equally warm and competent ($p=.13$). Warmth showed the greatest divergence across sources and so we focused on warmth in Studies 3 and 4.

Study 3 examined whether Alexa's punishment following poor performance could be mitigated via warmth. Participants ($N=414$) were randomly assigned to evaluate either Alexa or a human meteorologist who was performing below expectations. We also manipulated the presence or absence of warmth information (i.e., "Even though X gets the forecast wrong sometimes, please remember that there are people behind X's forecasts…these employees are dedicated, have positive intentions, and take a genuine interest in helping others"). While warmth did not influence support for meteorologists ($p=.67$), reminding participants that Alexa is powered by humans resulted in greater support ($p=.032$).

Study 4 ($N=242$) featured a similar design as Study 3 with two exceptions: 1) Alexa herself (vs. behind-the-scenes employees) was imbued with warmth or not and 2) we measured perceived warmth. Moderated mediation analysis revealed that, in the absence of a warmth boost, participants indicated lower intentions to use Alexa relative to a human source ($p<.001$); this was mediated by the perception that Alexa possessed less warmth ($p=.006$; 95% CI: -.63, -.07). However, with a warmth boost, Alexa was essentially identical to a human source in warmth ($p=.87$), which meant participants were equally willing to use Alexa versus a meteorologist even after evidence of poor performance ($p=.26$; 95% CI: -.17, .22).

In sum, five studies provide evidence that consumers have different expectations for information sources as a function of anthropomorphic qualities. As a result, consumers are more or less forgiving of these sources following poor performance. Anthropomorphic devices suffer the burden of needing to be equal parts warm and competent, whereas humans can be relatively warm and mobile apps can be relatively competent. Anthropomorphic devices do not get the "warmth" reprieve that humans do following poor performance unless provided with an extra warmth boost. Thus, greater expectations result in less support following evidence of poor performance.

Is Male the Default Gender? The Distinctive Effects of Anthropomorphizing Products as Male versus Female

EXTENDED ABSTRACT

In the last decade, we have seen an explosion of research exploring the antecedents and consequences of anthropomorphism. Despite being a fundamental trait of humanness, the gender of an anthropomorphized entity has remained largely unexamined. Are anthropomorphized entities perceived as possessing gender and, if so, are they perceived as female or male? How might consumers perceive and interact differently with female versus male entities? Can we expect gender stereotypes prevalent in the social world to be operating in the brand world too?

To answer these questions, we draw on the phenomenon of androcentrism whereby men are viewed as the gender-neutral standard while women are perceived as gender-specific (Bailey et al. 2018). For humans, male is the default and male terms are used to represent both genders (e.g., using "guys" when referring to a mixed-gender group), but female terms refer specifically to women. Additionally, research has documented strong gender stereotypes: women are associated with communal traits like kindness, warmth, and sympathy while men are associated with agentic traits like assertiveness, competence, and independence (Eagly & Steffen 1984).

In our first two studies, we demonstrate that when the gender of the anthropomorphized entity is unspecified, androcentrism will

emerge. In study 1, the phenomenon of androcentrism manifests across a broad range of anthropomorphized products. In study 2, a brand anthropomorphized as female versus male is be perceived differently in terms of communion and agency in keeping with the gender stereotypes prevalent in our social world. Importantly, when the anthropomorphized brand's gender is unspecified, the product is perceived as masculine and similar to when the brand is anthropomorphized as male.

Study 1: 218 Mturk participants were assigned randomly to 5 out of 20 possible nonhuman entities and asked to imagine each entity had to come to life as a person and to describe a day in the entity's life. These entities included abstract concepts like time and nature, concrete objects like a sofa, and television, and edible objects like a hamburger and sushi roll. Results from two independent coders indicated that on average, the majority of participants (65%) spontaneously attributed gender to anthropomorphized entities, with more participants attributing male (46%) than female gender (19%; $\chi^2=12.00$, $p<.05$). Moreover, coding (1=very masculine, 7=very feminine) indicated that anthropomorphized entities were on average described as more masculine ($M=3.69$, $H_0=4$, $p<.0001$). Finally, when directly asked about each entity's gender, results across all entities showed that 66.3% of the participants selected male while 33.7% selected female ($\chi^2=5.45$, $p<.05$).

Study 2: 313 Mturk participants evaluated a coffee company anthropomorphized as male (Mr. Bean Coffee Co.), female (Ms. Bean Coffee Co.), or with no gender specification (Bean Coffee Co.). Participants were asked to rate the company on five personality traits with lower values indicating femininity and higher values indicating masculinity (e.g., 1=cooperative, 7=competitive, $\alpha=.97$). Ms. Bean was rated the least masculine ($M_{Fem}=3.78$, $M_{Masc}=4.25$, $M_{Neut}=4.21$, $p's<.01$) while Mr. Bean and Bean were not rated differently. Gender-based expectations also influenced product attribute ratings (e.g., 1=sweet, 7=bitter, $\alpha=.71$). Ms. Bean was rated as tasting more in keeping with feminine stereotype ($M_{Fem}=3.87$, $M_{Masc}=4.22$, $M_{Neut}=4.32$, $p's<.01$) than Mr. Bean and Bean, the latter two were not rated differently. Consistent with these ratings, when asked to determine the brand's gender in the unspecified condition, participants overwhelmingly perceived Bean to be male (89%). Overall, these results show a strong androcentrism effect for anthropomorphized entities.

Study 3: Given that women are perceived as gender-specific while men are viewed as the gender-neutral standard, stereotypical gender association may be stronger for female entities compared to those for male entities. While female entities are expected to remain within the narrow confines of femininity, male entities are expected to vary to a greater extent. We predict that for brands anthropomorphized as female, consumers will perceive a greater match for gender-consistent product features; for brands anthropomorphized as male, this will not be the case.

596 Mturk participants evaluated a coffee company anthropomorphized as male (Mr. Bean Coffee Co.), female (Ms. Bean Coffee Co.), or not anthropomorphized (Bean Coffee Co.). The coffee was described as having either masculine (dark, bold, bitter) or feminine (light, delicate, sweet) flavors. For Ms. Bean, participants perceived a greater match (e.g., Product flavors seemed appropriate, $\alpha=.97$) when the coffee had feminine versus masculine flavors ($M_{Fem}=5.95$, $M_{Masc}=5.40$, $p<.05$). However, flavor stereotypicality had no effect on matching perceptions for Mr. Bean ($M_{Fem}=5.68$, $M_{Masc}=5.59$, NS) or Bean Coffee Co. ($M_{Fem}=5.64$, $M_{Masc}=5.58$, NS).

Study 4: Finally, we test for the moderating role of consumers' interpersonal goals on androcentrism for anthropomorphized products. To the extent that consumers see products as extensions

of themselves and forms of self-expression (Belk 1988; Bodner & Prelec, 2003), consumers should be motivated to view an anthropomorphized product in a way that helps convey desirable traits to others. We predict that when consumers have a dominance goal, androcentrism will persist because the desired traits are stereotypically masculine; however, when consumers have an affiliation goal, androcentrism will be attenuated because the desired traits are stereotypically feminine.

358 Mturk participants imagined that they were considering a rental car for either an important business trip (dominance goal) or to meet up with a new friend (affiliation goal). The car was either anthropomorphized (e.g., speaking in first person) or not anthropomorphized (e.g., described in 3rd person). Perceived gender was measured in two ways. First, participants rated the car on the same traits used in Study 2. Results indicated that activating a dominance versus affiliation goal garnered more masculine personality ratings (M_{Dom}=3.79, M_{Affil}=3.37, p<.05), but only when the car was anthropomorphized. Next, participants were asked to give the rental car a name. Coding of these names (i.e., male, female, neutral) indicated that activating a dominance goal garnered more male (59%) than female names (28%, χ^2=6.31, p<.05), exhibiting androcentrism. Activating an affiliation goal attenuated this androcentrism effect (male=49%, female=36%, χ^2=.06, *NS*).

In sum, this research contributes by presenting gender as an important lens for a nuanced understanding of anthropomorphism and also by being the first to suggest an asymmetry in how gender is attributed to anthropomorphized entities.

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Comparisons are the Key to Context:
How Representations, Order and Evaluability Shape Context Effects

Chairs: Jennifer Trueblood, Vanderbilt University, USA
Jiaqian (Jane) Wang, University of Chicago, USA

Paper #1: "Seeing" the Attraction: The Attraction Effect in Choices Between Visual Stimuli

Jiaqian (Jane) Wang, University of Chicago, USA
Oleg Urminsky, University of Chicago Booth School of Business, USA

Paper #2: Context Effects Explained through the Accumulation of Simple Comparisons

Jennifer Trueblood, Vanderbilt University, USA
Nathan Evans, Vanderbilt University, USA and The University of Amsterdam, The Netherlands
William Holmes, Vanderbilt University, USA

Paper #3: Revisiting the Dynamics of Deferred Decisions: An Evaluability-Based View of Choice Deferral

Ioannis Evangelidis, Bocconi University, Italy
Jonathan Levav, Stanford University, USA
Itamar Simonson, Stanford University, USA

Paper #4: Distinguish Justifiability from Evaluability in Single vs. Joint Evaluation

Xilin Li, University of Chicago Booth School of Business, USA
Christopher K. Hsee, University of Chicago Booth School of Business, USA

SESSION OVERVIEW

Consumers are susceptible to context. A rich literature in marketing and psychology has explored context effects as theoretically important deviations from normative choice principles and as practical interventions to shift consumer choices. For example, adding a new option to the choice set can shift decisions by increasing the share of the middle option (Simonson, 1989; Simonson and Tversky, 1992), increasing the share of the asymmetrically dominant alternative (Huber, Payne, and Puto, 1982; Huber and Puto, 1983), prompting choice deferral by heightening decision conflict (Dhar, 1997; Tversky and Shafir 1992; Shafir, Simonson and Tversky 1993), and triggering preference reversals by enhancing attribute evaluability (Hsee 1996, Hsee et al. 1999; Hsee and Zhang 2010).

While context effects have been well-documented, the boundary conditions under which they occur have been less studied. In fact, the robustness of some context effects across different tradeoffs and representations has recently been debated (Evangelidis et al 2018, Frederick, Lee and Baskin, 2014; Huber, Payne and Puto, 2014; Simonson, 2014; Yang, & Lynn, 2014). The research in this session seeks to develop a richer understanding of the conditions under which context influences the evaluation of options. We investigate how choice sets and the characteristics of attributes interact to influence consumer decision-making process, highlighting the crucial role of how people make comparisons.

The first two papers investigate the robustness of context effects to how the options are presented. Contrary to prior research (Frederick, Lee and Baskin, 2014), **Wang and Urminsky** find robust evidence of attraction effects when both choice options are presented pictorially, which is enhanced when prompting people to compare the attributes. Employing a joint experimental and computational modeling approach, **Trueblood, Evans, and Holmes** propose a theory that

decisions arise from series of simple comparisons among options, giving rise to context effects. The theory predicts context effects will arise when options are presented sequentially in some orders but not others, consistent with their experimental results.

The last two papers investigate how the number of options (i.e. joint evaluation vs single evaluation) moderates consumer decisions. **Evangelidis, Levav, and Simonson** reconcile conflict-based and evaluability-based explanations of choice deferral. They show that when the alternatives' attributes are not highly evaluable or attractive in isolation, making comparison difficult, people defer choices less in joint evaluation than in single evaluation. **Li and Hsee** examine how context shapes the relative influence of evaluability and justifiability of options. They find that low-evaluability attributes are more influential in joint evaluation, which fosters comparisons, and low-justifiability attributes are more influential in single evaluation, which impedes comparison.

This session sheds light on the robustness of and pre-conditions for context effects. Overall, the research highlights the key role of comparisons for context effects, demonstrating that factors which shift the ease and likelihood of comparisons change the prevalence of context effects. This research contributes to reconciling prior debates about the robustness of and reasons for context effects (focusing on the attraction effect, choice deferral and joint-separate evaluation), and has broad implications for research on choice architecture and for marketing practices.

"Seeing" the Attraction: The Attraction Effect in Choices Between Visual Stimuli

EXTENDED ABSTRACT

The attraction effect refers to situations in which introducing an inferior option (i.e. a decoy) to the choice set of two alternative options increases the choice share of the option that resembles and dominates the decoy (i.e. the target) relative to that of the dissimilar option (i.e. the competitor) (Huber, Payne, and Puto, 1982; Huber and Puto, 1983). Past research has demonstrated the robustness of the attraction effect in various context such as choosing products and evaluating political or job candidates. However, whether the attraction effect occurs when the options or option attributes are presented perceptually (rather than quantitatively) is still highly controversial (e.g. Frederick, Lee, and Baskin, 2014; Kivetz, Netzer, and Srinivasan, 2004; Spektor, Kellen, and Hotaling, 2018; Trueblood, Brown, Heathcote, and Busemeyer, 2013; Trueblood and Pettibone, 2017). Evidence from four pre-registered experiments showed that the visual attraction effect does exist, it requires correct perceptions of the relationships between the attribute values, and is amplified by prompting participants to make trade-offs between attributes.

Study 1 (N=716) was a replication and extensions of Frederick, Lee, and Baskin's (2014) Study 3c. We also explored whether the attraction effect occurs specifically when participants successfully detected the relative attractiveness of each option on each attribute (i.e. perceived the decoy as asymmetrically dominated by the target). We used a 2 (task sequence: ratings precede choices vs choices precede ratings) × 2 (choice sets: no decoy vs with decoy) between-subjects design. Participants were told that they were going to buy a second television and there were a few options available. These options had

the same screen size but varied in price (presented numerically) and image quality (presented pictorially). Participants rated the attractiveness of the price and of the image quality of each television, either before or after making their choice among the televisions.

We successfully replicated Frederick, Lee, and Baskin (2014). The provision of the decoy significantly increased the choice share of the target over the competitor when ratings preceded choices (28% vs. 43%, chi²=7.36, p=.007) but not when choices preceded ratings (34% vs. 36.5%, chi²=.19, p=.662). Thus, ratings-first enhanced the decoy effect (β=.55, S.E.=.34, z=1.63, p=.102). However, when presented with visual stimuli, people may not perceive the decoy as dominated by the target. Using only the subset of the data where all participants successfully detected the relative attractiveness of each option on each attribute, we found more nuanced results. When participants rated both attributes before making their choices, the inclusion of decoy increased the share of the target (27% vs. 48%, chi²=10.21, p=.001). When ratings followed choices, a directional attraction effect also emerged (32% vs. 41%, chi²=2.08, p=.150).

Study 1, like the prior research it was based on, confounds visual presentation with differential ease of processing, since image is presented visually but price is presented as a number. Study 2a (N=835) tested the attraction effect when both product attributes were presented pictorially, varying whether participants rated the attributes before or after making the choice, as in Study 1. The choice sets consisted of equally priced televisions with different image quality and screen size, each presented visually as a separate attribute. A logistic regression with the choice of the target as dependent variable revealed the attraction effect whether ratings preceded the choices (26% vs. 57%, chi²=38.59, p < .001) or choices preceded ratings (40% vs. 58%, chi²=12.19, p < .001). The attraction effect was larger when participants rated the items before choice (β_interaction=.59, S.E.=.30, z=1.97, p=.049). We also found that less people chose the decoy if they evaluated all options before picking an option (5% vs. 16%, chi²=11.96, p < .001). However, excluding participants who failed to detect the relative attractiveness of the options did not change the results. It suggested that rating the visual stimuli before decision-making helped participants determine the relationships among the options. We replicated the attraction effect for both ratings-first and choices-first in a follow-up Study 2b (N=859), in which we changed the decoy so that it was instead asymmetrically dominated by the high-resolution option.

Why does having participants rate the items first increase the attraction effect? We propose that this is because it facilitates making attribute comparisons, not just prompting a numerical interpretation. To test this, Study 3 (N=842) employed a 2 (comparison prompt: present vs. absent) × 2 (choice sets: no decoy vs with decoy) between-subjects design. We asked participants in the comparison conditions (but not the control conditions) to write about how appealing each of the options was on each of the two attributes before making a choice. The stimuli were identical to those in Study 2a.

While we found an attraction effect in both conditions, participants who wrote about the option attribute comparisons before choosing showed a stronger effect (26% vs. 54%, chi²=31.34, p < .001) than those in the control condition (46% vs. 59%, c²=6.71, p=.010; β_interaction=.71, S.E.=.29, z=2.41, p=.016). Additionally, the writing task reduced the share the decoy from 12% to 3% (chi²=13.23, p < .001). The results remained significant in the subset of data where participants successfully detect the relative attractiveness of the options.

Thus, the writing task yielded similar effects enhancing the attraction effect as the rating task in Study 1 and 2a. This suggests that the stronger attraction effect when ratings preceded choices was not because the rating process converted pictorial information into the numerical format as Frederick, Lee, and Baskin (2014) proposed. Instead, the results suggest that both rating or verbally evaluating the options prompted people to compare the alternatives more carefully and made more trade-offs between two attributes. Accordingly, people could more readily perceived the target as dominating the decoy, bolstering the attraction effect.

Evidence from four experiments confirms the existence of visual attraction effects, and identifies the detectability of the decoy and the likelihood of engaging in attribute comparisons as moderators of the strength of the attraction effect.

Context Effects Explained through the Accumulation of Simple Comparisons

EXTENDED ABSTRACT

One of the most interesting findings in the multi-alternative, multi-attribute choice literature is the effect of introducing a new alternative on preferences for existing alternatives. Decades of research have shown that preferences are sensitive to the context created by the choice set (e.g., the attraction effect). Although context effects have been documented in numerous studies, the specific circumstances necessary for them to occur is a puzzle. Sometimes, the effects disappear and even reverse, suggesting that they are fragile (Frederick, Lee, & Baskin, 2014; Trueblood, Brown, & Heathcote, 2015). The present work describes a theory of the cognitive processes involved in multi-alternative, multi-attribute and how these processes can lead to context effects in some situations and not others. The theory is formalized using mathematical and computational modeling, allowing for precise predictions and rigorous theory testing.

Our hypothesis is that decisions arise from a sequence of very simple comparisons among options. To illustrate, consider the problem of selecting a new apartment out of three possible candidates (labeled A, B, and C) where the attributes of interest are 'general condition' and 'distance to work'. In this scenario, the simplest possible comparisons that a person can perform are between two alternatives on a single attribute. In the proposed theory, we assume that people build up preference for different options through a sequence of these very simple pairwise comparisons. For example, in the apartment choice task, a participant might first compare apartments A and C along the 'general condition' attribute. Following this comparison, the participant might compare apartments B and C along the 'distance to work' attribute, and then they might compare apartments A and B along the 'general condition' attribute. This process continues until the participant has enough information to make a decision. We assume that the amount of information needed for the decision is governed by an internal threshold. As a person goes through the comparison process, he/she is updating the preference states for the different options until the preference state for one of the options surpasses the internal threshold, triggering a decision. In addition, we assume that the amount of time spent on a comparison is related to the similarity of the attributes being compared. We hypothesize that people spend more time comparing attributes that are more difficult to discriminate (i.e., more similar).

The above theory can be mathematically formulated as a random walk model, falling within the general class of sequential sampling models that are widely used in cognitive psychology and neuroscience (Ratcliff, 1978; Gold & Shadlen, 2007). Through model simulations, we show that the proposed theory explains the main three context effects – attraction (Huber, Payne, & Puto, 1982), compromise (Simonson, 1989), and similarity (Tversky, 1977). We also show that the model explains why the attraction and compromise effects vanish for advantaged as compared to disadvantaged options (Evangelidis,

Levav, & Simonson, 2018). Going beyond simulations, we discuss how the theory can be embedded within a choice/response time model (Trueblood, Brown, & Heathcote, 2014). Using this instantiation of the theory, we describe a large scale test (Evans, Holmes, & Trueblood, 2019) of the theory using data from 12 different experiments appearing in 6 different published studies (Trueblood, 2012; Trueblood, Brown, Heathcote, & Busemeyer, 2013; Trueblood, Brown, & Heathcote, 2014; Trueblood, Brown, & Heathcote, 2015; Farmer, Warren, El-Deredy, & Howes, 2017; Parrish, Evans, & Beran, 2015) examining the attraction, compromise, and similarity effects in risky decision-making, inference, and perception with both humans and non-human primates (total of 614 human and 7 non-human primate participants). The proposed theory is compared to three other theories of multi-alternative, multi-attribute choice (Roe, Busemeyer, & Townsend, 2001; Usher, & McClelland, 2004; Bhatia, 2013) and shown to be superior to all three across the 12 data sets.

A key idea in the proposed theory is that simple comparisons drive the evaluation of alternatives. In a new laboratory experiment (N=50), we increase the difficulty in comparing different options and examine the resulting influence on preferences. To accomplish this, we present options one at a time, so that individuals never see alternatives simultaneously. Specifically, we develop a sequential version of a well-established perceptual attraction effect paradigm where participants are asked to judge the area of rectangles that differ on the attributes of height and width (Trueblood, Brown, Heathcote, & Busemeyer, 2013; Trueblood, Brown, & Heathcote, 2015; Farmer, Warren, El-Deredy, & Howes, 2017; Parrish, Evans, & Beran, 2015; Turner, Schley, Muller, & Tsetsos, 2018). Empirical results show a complex pattern of attraction and repulsion effects (i.e., reversal of the attraction effect) in different sequences, with no obvious heuristic pattern of responding (e.g. choosing the last alternative). Critically, these effects arise only from the sequencing of stimuli and not the stimuli themselves; the same stimuli presented in different orders yield different effects. We explain the results using our proposed model augmented with the assumption that memory impacts the comparison process. Our hypothesis is that forgetting leads to different decisions in different sequences due to the difficulty of comparing items retrieved from memory with items currently visible. We demonstrate that our theory predicts well the complex pattern of attraction and repulsion effects seen in the data.

In sum, the proposed theory sheds new light on the ongoing debate about the robustness of context effects (Frederick, Lee, & Baskin, 2014; Huber, Payne, & Puto, 2014; Simonson, 2014; Yang, & Lynn, 2014). Importantly, we show that the apparent fragile nature of these effects can be explained by understanding the cognitive mechanisms underlying multi-alternative, multi-attribute decision-making. Through a joint experimental and computational modeling approach, we show behavior is well explained by a dynamic and malleable comparison process through which preferences are constructed. Importantly, our results suggest that determining the "boundary conditions" of the context effects (Huber, Payne, & Puto, 2014) will be best accomplished by understanding the "boundary conditions" of the comparison process and its interaction with other cognitive processes. Given the prevalence of sequential consumer search (Diehl and Zauberman 2005), our results also identify a new and practically important moderator of context effects.

Revisiting the Dynamics of Deferred Decisions: An Evaluability-Based View of Choice Deferral

EXTENDED ABSTRACT

In online settings consumers are presented with options either jointly or in isolation. For instance, a consumer browsing portable hard drives might be presented with information about a 1TB hard drive, in addition to information about a higher-priced 2TB hard drive. On a different site the consumer might be presented with information about the 1TB drive, but with no information about similar items. In both scenarios the consumer can select the 1TB drive or defer choice. In which of the two scenarios will the consumer be more likely to defer choice?

Studies of choice deferral make a straighforward prediction: choice sets comprising two (or more) options that force people to make trade-offs are more likely to lead to deferral (Dhar 1997; Tversky and Shafir 1992; Shafir, Simonson and Tversky 1993). Shafir, Simonson, and Tversky (p. 21, 1993; see also Tversky and Shafir 1992) argue that "there are situations in which people prefer each of the available alternatives over the status quo but do not have a compelling reason for choosing among the alternatives and, as a result, defer the decision, perhaps indefinitely." This literature views choice deferral as a function of decision conflict—consumers are more likely to defer choice when they feel conflicted about what to choose. Choice sets that include a single option—as in the case of the second consumer in our opening example—do not create such a dilemma and the conflict that it evokes. Therefore, based on the canonical view of choice deferral, we would expect that the first consumer (i.e., the one faced with two options) would be more likely to defer choice compared to the second consumer (i.e., the one faced with a single option) because the former should feel more conflicted.

The conflict-based view traces deferral to preference uncertainty—a consumer is unsure which option to choose, so she chooses neither. However, consumers can also have uncertainty about the value of the option or options in the choice set—a consumer is unsure about whether or not a specific attribute level is valuable. Indeed, past research on evaluability suggests that people often have difficulty assessing the value of an attribute without a comparative context or reference (Hsee 1996, Hsee et al. 1999; Hsee and Zhang 2010). By this view, presenting consumers with options jointly facilitates an assessment of a target option's value. The implication of this leads to a conclusion that appears at odds with the above-cited classic research on deferral. Namely, if joint presentation of alternatives makes them easier to evaluate, then deferral should decrease relative to presentation of a single alternative because joint presentation allows for easier resolution of uncertainty. With respect to our opening example, we expect that the first consumer (i.e., the one faced with two options) would be less likely to defer choice compared to the second consumer (i.e., the one faced with a single option) because evaluability is relatively higher in the former case.

In this paper we reconcile these two contradictory predictions about choice deferral in one framework that accounts for both conflict-based and evaluability-based explanations. We propose that deferral depends on the interaction between evaluability and option attractiveness. When the value of an alternative's attribute cannot be easily evaluated or is not highly attractive in isolation, we predict that consumers will be more likely to defer choice when presented with a single option as opposed to when presented with two options. In other words, when consumers have uncertainty about the subjective value of the alternatives' attributes so that they have difficulty assessing their utility from the options, they will defer choice. In contrast, the conflict-based prediction of choice deferral—that defer-

ral rates are higher when consumers are presented two options as opposed to a single alternative—is more likely to manifest when the options are both highly evaluable and highly attractive in isolation. In other words, when consumers are certain about their utility from the alternatives (i.e., the options are evaluable) and these alternatives are attractive enough to consider, but uncertain about which of the two alternatives is superior, they will elect to defer more often than when presented with one of the alternatives in isolation. In our studies we predominantly find support for the evaluability-based account of deferral, and only manage to replicate the conflict-based results when the single option is made easy-to-evaluate and extremely attractive in isolation (see Studies 6a and 6b). Thus, our data suggest that the conflict-based view of deferral may be more limited in scope than previously believed.

We present robust evidence for our propositions in 14 studies. Studies 1a-1h consistently show that deferral rates are lower when participants are presented with two options compared to when they are presented with either alternative in isolation. In Study 2 we replicate our basic finding in an incentive-compatible setting where decisions are consequential.

We provide support for the proposed process in Studies 3-5. In Study 3 we show that evaluability—but not decision conflict—mediates the effect of the choice set on deferral. In Study 4 we provide further evidence that our effects are predicated on consumers' diminished ability to evaluate alternatives presented in isolation. We show that our basic result is particularly pronounced when the two options are comparable—such as when they belong to the same product category—because comparable options facilitate evaluations of performance. In Study 5 we find that our effects are moderated when the competitor is a phantom (unavailable) alternative instead of being fully omitted from the binary set. This result is consistent with the notion that our effects are predicated on differences in consumers' ability to evaluate alternatives.

Finally, in Studies 6a and 6b, we bridge the discrepancy between our results and those reported by earlier research. We empirically demonstrate that the effect reported by previous research may be obtained when the options are both highly evaluable and extremely attractive in isolation. Overall, our work contributes to theory on context-effects, deferral, and choice architecture.

Distinguish Justifiability from Evaluability in Single vs. Joint Evaluation

EXTENDED ABSTRACT

Most existing research on joint evaluation (JE) versus single evaluation (SE) use stimuli that simultaneously vary on at least two attributes (e.g., both GPA and work experience of a job candidate), and show preference reversals between JE and SE. This research studies a more basic question: if two stimuli vary on only one attribute, will the evaluations of the two stimuli differ more in JE or in SE? In other words, holding everything else constant, would a given attribute exert more influence in JE or in SE?

Integrating prior research on evaluability and on should-versus-want conflicts, we propose that the answer depends on two orthogonal characteristics of the attribute—evaluability (i.e., whether people "can" evaluate a given value of the attribute without having to compare it with other values), and justifiability (i.e., whether people believe they "should" base their decisions on the attribute). Specifically, we submit the following four propositions about the relationship between the type of an attribute and its relative influence between JE and SE.

We have completed several experiments to test the propositions, and we briefly describe three experiments here. Experiment 1 tested Propositions 1 and 2, and included two type-of-attribute conditions: low-evaluability/high-justifiability and high-evaluability/low-justifiability. In both conditions, we asked jury-eligible US participants to assume the role of juror members, and determine the prison term for a US fighter pilot who mistakenly killed civilians in an overseas operation. Each participant read either two scenarios (JE) or one of the two scenarios (SE). In the low-evaluability/high-justifiability condition, the only attribute that differentiated the two scenarios was the number of civilians killed, either 10 or 20. In the high-evaluability/low-justifiability condition, the only attribute that differentiated the two scenarios was the ethnicity of the civilians killed, either Belgians or Somalians. Supporting Proposition 1, number of victims had a greater effect on the imposed prison term in JE than in SE (β= -.26, p=.02, by using a contrast code regression analysis). In contrast, supporting Proposition 2, the ethnicity of the victims had a greater influence in SE than in SE (β= .43, $p < .001$). Specifically, in JE, respondents imposed similar punishments on the fighter pilot whether he killed Belgians or Somalians, but in SE, respondents imposed significantly harsher punishment if he killed Belgians rather than Somalians.

In Experiment 2, we orthogonally manipulated the justifiability and the evaluability of an attribute, and tested all of the four propositions. We asked participants to rate the qualifications of two job candidates who differed on only one attribute—test score. We manipulated the evaluability of the score by using either numbers or words, and the justifiability of the score by telling participants whether they should base their ratings on the score or they should not do so. In JE, the two candidates were presented side by side, and in SE, the two candidates were separated by some fillers. The results supported our theory. In the low-evaluability/high justifiability condition, the score was more influential on participants' ratings in JE than SE, $F(1,130)$=24.81, $p < .001$, while in the high-evaluability/low-justifiability condition, the score is more influential in SE than JE, $F(1, 133)$=6.11, p=.015. In the low-evaluability/high-justifiability condition, the score was similarly influential, p=.454, and in the low-evaluability/low-justifiability condition, the score was similarly uninfluential, p=.405.

Experiment 3 was a field experiment. It focused on a high-evaluability/low-justifiability attribute (the ethnicity of a service seeker) and tested Proposition 2. We posted two tutor-seeking ads either jointly or separately on a service exchange website, and we described one of the tutor seekers as from Europe and the other as from Africa. We asked interested tutors to indicate their minimal-acceptable rates. We found that in JE, interested tutors charged the same amount for the two tutor seekers, p=.216, but in SE, interested tutors charged significantly higher prices for the African than for the European, suggesting that the ethnicity of the service-seeker had a greater influence in SE than in JE, $t(93)$=-2.20, p=.031.

To the best of our knowledge, this is the first research to integrate both justifiability and evaluability in one theoretical framework. By doing so, it is able to explain many seemingly contradictory findings in the literature, and reconcile alternative accounts of JE-SE preference reversals. Because discriminatory factors are typically high-evaluability/low-justifiability attributes, this research also sheds light on how discriminatory factors influence decisions and how to mitigate such influences.

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Beliefs About the Future:
Anticipating the Quality, Controllability, and Duration of Future Experiences
Chair: Kristin Donnelly, Haas School of Business, University of California, Berkeley, USA

Paper #1: Consumers Believe They Will Have More Control Over the Future than They Did Over the Past
> Elanor F. Williams, Washington University in St. Louis, USA
> Robyn A. LeBoeuf, Washington University in St. Louis, USA

Paper #2: Does Choice Cause an Illusion of Control?
> Joowon Klusowski, University of Pennsylvania, USA
> Deborah A. Small, University of Pennsylvania, USA
> Joseph P. Simmons, University of Pennsylvania, USA

Paper #3: When Experiences Go Badly: The Buffering Effect of Scheduling on Dissatisfaction
> Gabriela N. Tonietto, Rutgers University, USA

Paper #4: Time Periods Feel Longer When They Span More Boundaries
> Kristin Donnelly, University of California, Berkeley, USA
> Ellen R.K. Evers, University of California, Berkeley, USA

SESSION OVERVIEW

Much of consumer behavior involves thinking about the future. This is particularly true in recent years, as online platforms allow consumers to purchase and plan exponentially more services or activities in advance. As such, modern consumer decision-making relies on the ability to correctly anticipate numerous aspects of a future experience, such as how long it will last, the enjoyment or utility it will provide, and the degree to which the consumer can secure a good outcome. Together, the papers in this session explore beliefs about the future across all of these dimensions. We present novel biases, challenge existing ones, and examine consequences of those beliefs for consumer decision-making.

The first two papers investigate beliefs about the controllability of future outcomes. Williams and LeBoeuf show that people believe that the same outcomes will be more controllable in the future than they were in the past. This was true for both positive and negative outcomes. The authors propose that people may substitute their current perceptions of control over the past and the future when remembering the past and forecasting the future. This "illusion of future controllability" is complemented by work by Klusowski, Small and Simmons, who investigate whether the perception of control—absent actual control—makes future outcomes feel more likely. They find that illusory control does not affect perceived likelihood of winning a lottery, contrary to extant literature on the topic. Rather, only choices that increase actual control increase optimism about future outcomes.

In the third paper, Tonietto demonstrates that consumers believe future experiences that are scheduled (vs. impromptu) will be higher-quality, and that they will be more satisfied with the outcome. These expectations seem to match reality: The author finds that the mere act of scheduling increases satisfaction with an experience. Moreover, when an experience went badly, consumers who scheduled still reported greater satisfaction than consumers who did not, because both groups adjusted from their expectations to a similar degree. Thus, scheduling may provide a buffer against dissatisfaction when an experience goes wrong.

Finally, Donnelly and Evers show that people perceive time periods as longer when they span more hour boundaries. For example, 1:30 – 3:00 (a *boundary-expanded* period) feels longer than 2:00 –

3:30 (which is *boundary-compressed*). The authors demonstrate that this perception may affect consumer decision-making. For example, consumers seemed to prefer boundary-compressed periods—which "feel shorter"—when scheduling unpleasant activities. Moreover, consumers required a higher amount of money to endure a long waiting period that was boundary-expanded compared to compressed. They were also willing to pay more to avoid boundary-expanded waiting periods than boundary-compressed.

Taken together, this session offers new insight into how people think about the future and demonstrates how those perceptions shape the consumer experience. Attendees will learn how people think about the controllability of future outcomes (Williams and LeBoeuf), how controllability shapes beliefs about future outcomes (Klusowski, Small and Simmons), and how consumers estimate and anticipate the duration (Donnelly and Evers) and quality (Tonietto) of future experiences.

Consumers Believe They Will Have More Control Over the Future than They Did Over the Past

EXTENDED ABSTRACT

Insanity, as the saying goes, is "doing the same thing over and over again but expecting different results." People trying to diet, quit smoking, or be financially responsible may make a dozen attempts before they see meaningful results, if they see results at all (Polivy and Herman 2002). We argue that one important reason for this "failure to learn from failures" is that people expect to have greater control over future events than they would have had over identical past events. This is consistent with other work showing that the future (relative to the past) seems more premeditated (Burns et al. 2012), involves more willpower (Helzer and Gilovich 2012), and seems more rational (O'Brien 2015). Our work expands on this research, showing that for a variety of experiences, including negative and chance events, people believe they will have more control over the future than the past, and that this difference stems from an overgeneralized belief that the future is open and the past is fixed.

In study 1, participants rated whether they had more control over ten items, such as their diet and finances, last month, or whether they will have more control next month. Participants also rated whether they believed they would generally have more control over their lives last month or next month. For all ten items, participants anticipated having greater control next month than they had last month (significantly so in all but two cases). The general assessment also reflected a reliable belief that control would be greater in the future than the past, $t(70) = 4.13$, $p < .001$, $d = .49$.

Study 2 investigated whether this effect emerges even for chance effects in a controlled setting. Participants played a version of Battleship in which they guessed the placement of ships on another person's board, in two rounds, without feedback. Between the rounds, they rated their control over the past round and then over the upcoming round. Participants believed they would have significantly more control over the outcome of the future round than the past one, $t(92) = -2.01$, $p = .047$, $d = .27$, and the outcome would be more due to their own ability in the future than the past, $t(92) = -3.29$, $p = .001$, $d = .49$.

Study 3 tested whether this difference in perceived control leads people to think they will act differently in the future compared to

the past. Participants considered a choice between a "should" versus "want" movie (Milkman et al. 2009). They were more likely to believe they would choose to watch a "should" movie four months from now than four months ago, χ^2 (1, N = 152) = 5.53, p = .02, ϕ = .19. Participants also thought the movie decision would be more under their control in the future than the past, $t(150)$ = 2.27, p = .02, d = .38. Perceived control partially mediated the movie choice, suggesting that participants' feelings of greater future control led them to believe they would exert greater self-control over a future choice.

Study 4 examined whether people believe they will have greater control over future events than past events even when the consequences of having control are negative (to address the possibility that this asymmetry might be due to general optimism). Participants imagined four situations in which something negative happened (e.g., eating too much at a buffet, drinking too much at a party). They imagined this happening in the past and in the future, and indicated in which of those two time periods the negative behavior would have been more likely to have been under their control. For all four behaviors, participants believed that they would be more likely to "misbehave" for reasons under their control next month than last month, all ps < .001.

Study 5 similarly looked at whether people perceive greater future (vs. past) control over negative as well as positive outcomes, this time between-subjects. Participants imagined that, either last fall or next fall, they were installing a new DVD player; the installation succeeded or failed. Participants believed that the outcome, either success or failure, would be more due to factors under their control in the future than the past, $F(1, 199)$ = 4.53, p = .04, η_p^2 = .02. There was no interaction between timeframe and outcome valence (p = .57).

Finally, study 6 examined the process underlying this asymmetry. Notably, this asymmetry is actually valid from the perspective of the present: the past cannot be changed, but the future can. We suspect that people substitute their perception that the future is currently open and the past is currently fixed when assessing how controllable the future will be when it happens and how controllable the past was when it happened. To test this idea, we attempted to make the future feel as fixed and unchangeable as the past. Participants read either an excerpt of an essay that claimed that free will exists, or an excerpt that claimed that free will does not exist and that people's actions are predetermined. Then they completed a version of the DVD player scenario from study 5. Participants in the free-will condition showed the typical pattern of results: the installation seemed more under their control in the future, $t(201)$ = 2.99, p = .003, d = .42. However, in the no-free-will condition, the future and past seemed equally controllable (p = .91). Thus, by shifting participants' perceptions of the openness of the future, we also shifted their beliefs about how controllable the future was relative to the past.

Our studies suggest that, despite the future's inherent uncertainty, people think they will be better able to control it than the past, for good or ill. They seem to substitute their *current* perceived ability to control the past and the future for their ability to control the past in the past and the future in the future. This asymmetry in beliefs about control may lead people to repeat the same mistakes, with hope but little chance of getting different results.

Does choice cause an illusion of control?

EXTENDED ABSTRACT

Previous research suggests that choice causes an illusion of control: having a choice increases people's tendency to believe that they can control outcomes that cannot be controlled. For example, studies have suggested that people believe they are more likely to win lotteries when they choose the tickets themselves than when they do not (Langer, 1975).

This notion suggests an important implication for consumer research. If giving people a choice over a chance outcome increases their perceived ability to influence that outcome, then practitioners could use this insight. For instance, marketers could harness this to make consumers feel more optimistic about a desired outcome or experience numerous benefits of increases in perceived control (Taylor & Brown, 1988). Furthermore, they could even exploit this to induce consumers to make irrational and potentially costly decisions (Sloof & von Siemens, 2017).

Although the literature frequently references the effects of choice on the illusion of control, a close look at the evidence reveals potential alternative explanations. First, people's greater valuations for their lottery tickets after a choice could reflect a personal preference for the chosen tickets (e.g., featuring their favorite sports teams/players), rather than illusory control (Langer, 1975). Second, people's greater reluctance to sell or trade the tickets they actively chose may also reflect a desire to avoid regret, independent of control (Kahneman & Miller, 1986; Risen & Gilovich, 2007; van de Ven & Zeelenberg, 2011). Third, the effects of choice in some studies may have been confounded with those of involvement (e.g., the effects of choosing which number wins in a die roll game vs. rolling the die oneself), and studies that have attempted to isolate the two effects suggest mixed results (Filippin & Crosetto, 2016; Martinez, Bonnefon, & Hoskens, 2009). Therefore, it remains unclear whether choice alone causes an illusion of control.

In this research, we conducted 11 pre-registered experiments (total N = 5,885; approximately 200 per condition) to examine whether choice truly causes an illusion of control. In so doing, we proposed the following modifications and extensions from previous research. First, we experimentally manipulated choice without confounding other factors (e.g., involvement). Second, we assessed the illusion of control using a variety of outcomes measures (e.g., subjective likelihood, feelings and confidence, wagers, outcome evaluations). Third, we examined the effects of choice not only under risk, but also under ambiguity. Fourth, we investigated decisions with objectively evaluable outcomes (e.g., lotteries) as well as subjectively evaluable outcomes (e.g., chocolates). Fifth, we provided a direct comparison between the effects of choice conferring no actual control vs. choice conferring actual control. Ultimately, we strived to test the widely acknowledged claim that choice causes an illusion of control (Langer, 1975).

In Studies 1-4, following previous research, participants played a lottery in which they either had a choice among lottery options or received randomly selected options. Then we measured perceived control using different outcome measures (e.g., subjective rating scales as well as wager amounts). In Studies 5-7, we varied the levels of uncertainty in the lottery (e.g., risk, ambiguity) to try to facilitate an illusion of control. In Studies 8-9, we examined decision contexts with more subjective outcomes (e.g., chocolates) to extend the scope of our research. Across all nine experiments and 13 pre-registered outcome measures, we found no evidence that choice caused an illusion of control. The effect of choice went in the predicted direction on six of these measures (with p-values of .738, .963, .134, .321, .202, and .798) and in the unpredicted direction on seven of these measures (with p-values of .920, .214, .847, .124, .712, .517, and .877).

To rule out the possibility that none of these outcome measures fully captured changes in one's experience of control, we tested whether these measures responded to choice that conferred actual

control. Specifically, in Studies 10-11, we not only varied choice, but also the absence vs. presence of actual control. In the former condition, the options in the choice set were undifferentiated, i.e., choice conferred no actual control. In the latter condition, the options were meaningfully differentiated, i.e., choice conferred actual control. In Study 10, we found that choice did not increase one's wagers in a lottery when the options were undifferentiated (M_{choice} = .18, SD_{choice} = .15; $M_{no\text{-}choice}$ = .18, $SD_{no\text{-}choice}$ = .16; $t(395)$ = .35; p = .724), but it did when the options were differentiated (M_{choice} = .25, SD_{choice} = .16; $M_{no\text{-}choice}$ = .20, $SD_{no\text{-}choice}$ = .17; $t(397)$ = 3.15; p = .002). Similarly, in Study 11, we found that choice among chocolates did not increase predicted satisfaction when the options were undifferentiated (M_{choice} = 6.37, SD_{choice} = 1.64; $M_{no\text{-}choice}$ = 6.19, $SD_{no\text{-}choice}$ = 1.73; $t(396)$ = 1.02; p = .308), but it did when the options were differentiated (M_{choice} = 7.85, SD_{choice} = 1.08; $M_{no\text{-}choice}$ = 6.04, $SD_{no\text{-}choice}$ = 2.45; $t(398)$ = 9.58; p < .001). Overall, choice increased perceived control only when the options were meaningfully differentiated, allowing the choice to confer actual control.

The notion that choice causes an illusion of control is broadly accepted (and oft-cited) in consumer research and many related disciplines. Yet, to our surprise, we find no evidence that choice causes an illusion of control – across different outcome measures, levels of uncertainty, and decision contexts. Our experiments suggest that choice increases perceived control only when it confers actual control.

When Experiences Go Badly: The Buffering Effect of Scheduling on Dissatisfaction

EXTENDED ABSTRACT

Experiences are vitally important for well-being (Van Boven and Gilovich 2003), but happiness can be severely undermined when experiences go poorly (Nicolao, Irwin, and Goodman 2009). In the present research, I propose that scheduling can buffer against dissatisfaction when something goes badly. In particular, I predict that the mere act of scheduling can alter consumers' beliefs about future activities, increasing expected satisfaction. As such, when something goes badly, consumers who scheduled are more satisfied, because they adjust from a higher expectation.

A pilot test revealed that consumers tend to choose to schedule (vs. have impromptu) experiences that are relatively more important, extraordinary, special, and bigger. Such selection behavior may produce a lay belief that if an activity is scheduled, then it must be high quality, leading consumers to expect greater satisfaction for the *same* activity when it is scheduled. When expectations are negatively disconfirmed, such as when an experience goes badly, consumers adjust away from their original expectation (Diehl and Poynor 2010; Oliver 1980). Because scheduled consumers are predicted to have higher expectations, they are predicted to have higher actual satisfaction when something goes badly. Six studies test the proposed effects.

Study 1 tested whether scheduling increases satisfaction with an actual experience that goes badly as evidenced by more positive word of mouth using a dataset of 480 restaurant yelp reviews. Because making a reservation involves setting a specific time in advance, consumers with and without a reservation were compared as a measure of scheduling. To assess whether anything went badly, a hypothesis-blind research assistant coded for whether the review contained at least one complaint.

There was a main effect of reservation (p=.001). Overall, those with a reservation (M= 4.18) gave a higher star rating than those who did not have a reservation (M=3.93). I also found the predicted interaction (p=.003). For those who lodged at least one complaint,

consumers gave a higher star rating if they had made a reservation (M=3.67) than if they had not (M=3.19, p<.001), but no such difference emerged for those consumers who did not have any complaints ($M_{Reservation}$=4.69, $M_{No\_Reservation}$=4.66). This result provides field evidence that scheduling in advance leads to greater satisfaction when part of the experience goes badly.

Building on this correlational finding, Studies 2a-2b experimentally manipulated scheduling directly. Participants in Study 2a (N=810) imagined that they either scheduled getting a coffee with a friend or got coffee impromptu (adapted from Tonietto and Malkoc 2016). Half of the participants read that they went to Starbucks while the other half read that they went to a "coffee shop" in order to test robustness of the effect to brand. All participants read that the service was extremely slow and indicated satisfaction (0=extremely dissatisfied, 100=extremely satisfied). Replicating the results in Study 1, there was a main effect of scheduling (p=.001) such that those who scheduled (M=34.51) were more satisfied than those who were impromptu (M=29.78). Neither the main effect of brand nor the interaction was significant.

Study 2b next tested the robustness of the observed effect to attribution of blame for the poor outcome. Participants (N=167) imagined that they either scheduled going to happy hour with a coworker or went impromptu. All participants then read that they ordered a cocktail, but really disliked it and indicated satisfaction. Participants then reported attribution of blame (1=entirely blame myself, 7=entirely blame the restaurant/bartender). On average, participants blamed themselves for the poor outcome (M=3.43, p<.001 compared to the midpoint). Despite this, there was a main effect of scheduling (p=.017). Once again, those who scheduled (M=38.16) were more satisfied than those who were impromptu (M=30.46). Neither the main effect of attribution, nor the interaction reached significance.

The remaining studies tested the proposed mechanism, whereby lay beliefs about scheduled tasks lead to greater expected satisfaction for scheduled activities, and this higher anchor produces greater satisfaction after something goes badly.

Study 3 tested the effect of scheduling and lay beliefs on predicted satisfaction. Participants (N=350) imagined that they either scheduled or got coffee impromptu and indicated how satisfied they expected to be with their experience. To assess lay beliefs, participants indicated whether scheduled or impromptu experiences tend to be more important, extraordinary, special, and bigger (1=definitely impromptu, 7=definitely scheduled). Replicating the results of the pilot, participants rated scheduled activities as higher quality on average (M=4.27; p < .001 compared to the midpoint).

There was a main effect of scheduling (p=.081) such that those who scheduled (M=79.46) expected to be more satisfied than those who were impromptu (M=76.30). This was qualified by an interaction with lay beliefs (p=.044). For those who more strongly believed that scheduled activities tend to be higher quality (.11 standard deviations from the mean or higher), scheduling increased expected satisfaction to a greater extent.

Study 4 (N=509) next tested whether expectations serve as an anchor by measuring both expected satisfaction and reported satisfaction following a poor outcome (slow service at a coffee shop). There was a main effect of scheduling (p=.009) with no significant interaction. Those who scheduled expected to be more satisfied, adjusted from this expectation to a similar degree, and thus reported greater satisfaction when something went badly.

Finally, Study 5 tested the proposed anchoring mechanism via moderation. Participants (N=812) imagined scheduling or getting coffee impromptu. Half of the participants read that the coffee shop had only two stars on yelp, providing a low expected satisfaction an-

chor. All participants then read that the service was extremely slow and indicated satisfaction. There was a main effect of scheduling (p=.028), such that overall, those who scheduled (M= 29.01) were more satisfied than those who were impromptu (M=25.86). This was qualified by the predicted interaction (p=.082). In the absence of external information about expectations, those who scheduled were significantly more satisfied ($M_{Scheduled}$=33.53, $M_{Impromptu}$=27.89, p=.006), but this difference was no longer significant once participants had a low-expectation anchor ($M_{Scheduled}$=24.49, $M_{Impromptu}$=23.83).

Although some experiences inevitably go poorly, little research has examined the factors that may abate dissatisfaction. The present work establishes that scheduling can help consumers to experience greater satisfaction with poor experiences.

Time Periods Feel Longer When They Span More Boundaries

EXTENDED ABSTRACT

Ten minutes lasts 600 seconds regardless of when the ten minutes start. However, time periods of equal duration may not always feel equivalent. Like many other abstract concepts, time has been sectioned into various categories (e.g., hours). We propose that time periods feel longer when they span more hour boundaries—1:30pm – 2:00pm, for example, feels longer than 2:00pm – 2:30pm because it enters a new hour.

Previous research finds that the presence of a category boundary exaggerates the distance between stimuli that fall on either side. For example, geographic locations in different states are perceived to be further apart than equidistant locations in the same state (Burris and Branscombe, 2005). People are judged as more dissimilar when arbitrarily assigned to different social groups (Allen and Wilder, 1979). Ranked items that are just within and outside of a category boundary, such as the "top 10", feel disproportionately further apart (Isaac and Schindler, 2014).

The present research documents a similar effect resulting from boundaries placed on time. We show that time periods that span more hours—and thereby cross more category boundaries—feel longer than periods of equal duration that cross fewer boundaries. We demonstrate this effect and its consequences for consumer decision-making in 9 pre-registered studies.

In study 1a, 125 participants were presented with pairs of equivalent time periods: one that spanned more hour boundaries (*boundary-expanded*; e.g., 3:30pm – 5:00pm) than the other (*boundary-compressed*; e.g., 3:00pm – 4:30pm). For each pair, participants selected which period "felt longer". Participants indicated that boundary-expanded periods felt longer than boundary-compressed, z = 4.94, p < .0001. Study 1b was a conceptual replication in which participants (N = 104) viewed time periods individually and rated "how long does this feel" on a sliding scale. Half of the periods were boundary-expanded versions of the other half (e.g., 2:30pm – 3:00pm as opposed to 3:00pm – 3:30pm). Participants rated boundary-expanded time periods to feel longer than boundary-compressed, t = 4.84, p < .0001.

Study 2a and 2b exclude bad mental math and preferential rounding as explanations for the effect. Studies 3a and 3b underscore the importance of boundaries. Study 3a finds that expanded periods only feel longer when the boundaries (i.e., end times) are explicit. Study 3b suggests that the effect stems from the number of boundaries spanned by a given period. Specifically, when hourly intervals were shifted to reverse the "type" of each period (e.g., such that 11:30am – 2:00pm became boundary-compressed, and 11:00am

– 1:30pm became boundary-expanded), judgments appeared to follow the new characterization.

We further demonstrate implications of these results for planning and consumer decision-making. In study 4, MTurk workers (N = 576) estimated how many HITs they could complete in a series of hypothetical periods, manipulated between-subject to be either boundary-expanded or boundary-compressed. Participants considering boundary-expanded periods estimated that they could perform more hits during the allotted times (M = 75.13) than those considering boundary-compressed periods (M = 58.23), z = 3.16, p = .002.

In study 5, participants (N = 600) indicated which of two time periods they would rather schedule a hypothetical activity. As before, one period was boundary-expanded and one was boundary-compressed. Half of the activities were those where people may want to minimize time; for example, when going to the DMV. The other half were activities that people likely want to maximize, such as free time or exploring. We hypothesized that when they want to maximize time, people may prefer boundary-expanded time periods, and when they want to minimize time, boundary-compressed periods may be more appealing.

We found that participants' choice of period (boundary-expanded vs. compressed) differed between the two types of activities, z = -5.53, p < .0001. As predicted, for the time-minimizing activities, participants disproportionately selected the boundary-compressed periods over the expanded, z = -5.35, p < .0001. The reverse was true for the time-maximizing activities, where participants selected boundary-expanded periods more often, z = 2.27, p = .023.

Lastly, study 6 (N = 347) examined changes in willingness to pay (WTP) and required compensation in two hypothetical scenarios involving waiting for transportation. We hypothesized that when a waiting period is boundary-expanded compared to compressed, decision-makers should 1) require a larger amount of money to switch to a later flight and 2) offer a larger amount of money to get on an earlier bus.

In the required compensation scenario, participants imagined that they were waiting to board a plane, but their flight is overbooked, and the airline is offering to pay them to take a later flight. As predicted, the amount of money that participants required to take a later flight was higher when the waiting period—the period between the present time and the later flight—was boundary-expanded compared to boundary-compressed, t = 2.46, p = .015.

In the WTP scenario, participants imagined that tickets on the next Greyhound bus are sold out, so they must buy a seat on a bus that leaves much later. They can offer money to switch tickets for an earlier bus. Again, as predicted, participants were willing to spend more money to get on an earlier bus when the waiting period was boundary expanded, t = 4.04, p < .0001.

Together, our studies suggest that time periods feel longer when they span more boundaries, and that this phenomenon may shape the scheduling and purchasing decisions consumers make in everyday life. This work is particularly relevant for businesses looking to optimally position their services. For example, dental offices may have an easier time attracting patients if they offer boundary-compressed appointment times, but the reverse may be true for massage parlors. An airline might successfully charge more for boundary-compressed flights. Broadly, this research provides novel insight into the ways in which consumers perceive time and anticipate the duration of future experiences.

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Growing Wise to Technology:
Understanding How Technology Affects Enjoyable Consumption
Chair: Holly S Howe, Duke University, USA

Paper #1: Understanding the Drivers of Binge-Watching
  Kaitlin Woolley, Cornell University, USA
  Marissa Sharif, University of Pennsylvania, USA

Paper #2: Too Much Enjoyable Information Leads to Less Enjoyment
  Ke Wang, Harvard University, USA
  Christopher Hsee, University of Chicago, USA

Paper #3: Doing it for the 'Gram: Sacrificing Enjoyment When Posting Online
  Holly S Howe, Duke University, USA
  Jordan Etkin, Duke University, USA
  Alixandra Barasch, New York University, USA

Paper #4: Preference Reversals Between Digital and Physical Goods
  Fuad Adnan Shennib, Stanford University, USA
  Rhia Catapano, Stanford University, USA
  Jonathan Levav, Stanford University, USA

SESSION OVERVIEW

Technology has profoundly changed how people consume enjoyable material. From how much and how fast to what types of content, technology enables people to consume in new and more varied ways. Video streaming services allow consumers to binge content (i.e., repeatedly watch similar content within a short period of time) they previously would have consumed at a slower, fixed pace. Social media allows consumers to broadcast their enjoyable consumption to others who would previously never have known how they spend their time (Barasch, Zauberman, Diehl, 2017). Rapid growth in the availability of digital products (e.g., e-books, streaming services) gives consumers new choices for how to consumer enjoyable content.

On the surface, such technological advancements should make consumers better off. Technology should give people more control over enjoyable consumption, as well as the ability to better align content with preferences. In contrast to this view, recent findings suggest

that new technologies may be impacting enjoyable consumption for the worse. For example, streaming services make it possible to remove commercials (Nelson, Meyvis, & Galak, 2009) and release an entire season's worth of content at one time (Lu, Karmarkar, Venkatraman, 2017), which may promote overconsumption and reduce enjoyment. Social media also encourages consumers to engage with others online rather than in more rewarding, offline social interaction contexts (Allcott, Braghieri, Eichmeyer, Gentzkow, 2019).

Beyond this preliminary evidence, however, researchers still know fairly little about *how* and *why* technology alters enjoyable consumption experiences. This session explores multiple ways in which technology can alter enjoyable consumption (e.g., binging, social media, digital media), and presents new mechanisms to explain why this shift occurs.

Four papers examine the effects of technology on enjoyable consumption. Papers 1 and 2 focus on how technology affects consumption volume. In Paper 1, Woolley & Sharif demonstrate that uninterrupted consumption distorts the way consumers experience time. This distortion prompts consumers to binge similar content. In Paper 2, Wang & Hsee demonstrate that an abundance of enjoyable material encourages people to consume more by consuming more

rapidly. Rapid consumption reduces immersion in the material, thus reducing overall enjoyment. Papers 3 and 4 explore how technology alters preferences. In Paper 3, Howe, Etkin, & Barasch demonstrate that when consumers anticipate sharing a leisure experience on social media, they choose well-known options over ones that better fit with their preferences. Finally, in Paper 4, Shennib, Catapano & Levav demonstrate that, although consumers are willing to pay more for physical than digital goods, they prefer (superior) digital goods to physical goods in choice contexts.

Together, these papers shed light on how technology shapes enjoyable consumption. Going beyond merely demonstrating the effects of technology, this session provides insight into how and why technology alters how much, how fast, and what content people consume. These findings not only advance our knowledge of how technology impacts consumers, but also how consumers make decisions about enjoyable consumption. This session should have broad appeal to researchers studying technology, experiences, hedonic consumption, time use, and well-being.

Binge Interrupted: Psychological Momentum Facilitates Binge Watching by Distorting Time Perceptions

EXTENDED ABSTRACT

Binge-watching behavior is on the rise: consumers are increasingly watching similar shows and video clips within a short period of time, rather than switching to different shows or tasks. Despite the increasing prevalence of binge-watching, the underlying psychology of this behavior is not well understood (Schweidel and Moe 2016), and conflicts with research on satiation and variety seeking, which suggests people enjoy experiences less the more they engage in them (Coombs and Avrunin 1977; Redden 2013). Across five studies, we provide causal evidence for the antecedents of binge-watching behavior. We propose that a lack of interruptions while viewing related content facilitates binging of similar videos (vs. different videos or tasks) by creating a "topical mindset." People who have an uninterrupted (vs. interrupted) experience when consuming media assume a mindset related to the topic of the videos they previously watched, leading them to choose to watch similar videos on the same topic, in line with their current perceived mindset.

Study 1 tested the influence of an interruption during the viewing experience on the decision to binge similar (vs. different) videos on Netflix. 100 students with Netflix accounts selected two series to watch and were randomly assigned to either the interrupted-viewing condition: Series A-Show 1, Series B-Show 1, Series A-Show 2, Series B-Show 2 or the uninterrupted-viewing condition: Series A-Show 1, Series A-Show 2, Series B-Show 1, Series B-Show 2. Participants then chose any show from Netflix to watch next. Participants were significantly more likely to continue the binge, choosing a show from the last series they watched, in the uninterrupted ($M_{\text{Uninterrupted}}$ = 44.6%) versus interrupted condition ($M_{\text{Interrupted}}$ = 18.9%; $p = .005$)

In Study 2, we examined the impact of an interruption from a different, less enjoyable domain, a math task. 400 participants from Amazon's Mechanical Turk (MTurk) completed three video tasks, three math tasks, and then choose the task they would complete next (word search vs. video). Participants in the uninterrupted-condition completed these tasks in an uninterrupted order: Math-Math-Math-Video-Video-Video. Participants in the interrupted-condition com-

pleted these tasks in an interrupted order: Math-Video-Math-Video-Math-Video. Participants in the uninterrupted-condition were significantly more likely to binge-watch a video next (46.9%) than those in the interrupted condition (35.8%; p = .025).

Study 3 examined a different type of interruption: an interruption before the choice to binge. In particular, we manipulated whether people watched videos in one setting, as in studies 1-2, or after a time delay, which served as another way to "interrupt" the experience of psychological momentum. 400 MTurk workers were assigned to watch two one-minute video clips (either two music videos or two nature videos). After watching their assigned video clips, participants chose a video topic to watch later in the week from the following options: music, nature, comedy, food. Two days later, participants received a survey again asking them which video clip they wanted to watch next (music, nature, comedy, or food). Overall, participants were more likely to choose to binge-watch a video from the same topic they initially watched (music or nature) when they were uninterrupted, at time 1 (53.46%) than at time 2 when they were interrupted by a time delay (42.31%, p < .001).

Studies 1-3 examined two different types of interruptions: interruptions during the viewing experience and interruptions prior to choice (via a time delay). In study 4, we examined how these interruptions interact with each other. 302 Mturk workers were instructed to upload a screenshot of the last five movies and/or TV series they watched on Netflix, and to self-report the date and genre for these last five videos viewed. We examined how an interrupted viewing experiencing (watching videos from the same genre in sequence vs. not) and an interrupted choice (watching videos on the same day vs. after a time delayed) influenced the choice of watching a similar genre next. As predicted, we found a significant Viewing Experience × Time Delay interaction (p = .008). People were only likely to binge watch a similar (vs. different) video when they did not experience either interruption (i.e., they had an uninterrupted viewing experience and there was no delay before their choice).

We suggest that viewing similar videos without an interruption leads people to perceive they are in particular "topical mindset," causing them to choose to watch another similar video to maintain this "topical mindset." Study 5 aimed to examine this prediction. 800 Mturk workers were randomly assigned to complete tasks in an uninterrupted sequence: Word Search-Word Search-Word Search-Video-Video-Video or an interrupted sequence: Word Search-Video-Word Search-Video-Word Search-Video. Prior to starting the task, they were asked which category of videos they wanted to watch (e.g., funny videos about kids, music videos). After completing the video and word search tasks, participants selected a task to complete next: word search task or binge by watching a video from the same category they watched previously. We measured whether participants perceived they were in a particular topical mindset, by asking them, "Do you currently feel you are in a [inserted category of previous videos watched] mindset?" and "Do you currently feel you are in the state of mind of watching [inserted category of previous videos watched] videos?" As in studies 1-4, people were more likely to binge in the uninterrupted (vs. interrupted) condition ($M_{\text{uninterrupted}}$ = 54.9%; $M_{\text{interrupted}}$ = 45.9%; p = .011). An uninterrupted (vs. uninterrupted) experience further led people to perceive they were in a mindset related to the topic of the videos they were watching ($M_{\text{uninterrupted}}$ = 6.41; $M_{\text{interrupted}}$ = 6.00; p = .005). Being in a topical mindset mediated the effect of condition on choice (β_{indirect} = .23, SE = .08, 95% CI = [.0683, .4018]).

Overall, these studies provide empirical evidence documenting an antecedent to binge-watching behavior. We find that people who have an uninterrupted (vs. interrupted) experience when watching videos perceive they are in a topical mindset, leading them to choose to binge-watch additional videos on the same topic.

Too Much Enjoyable Information Leads to Less Enjoyment.

EXTENDED ABSTRACT

In the current digital age, people have the option to consume and enjoy abundant information in the media and entertainment, from electronic books to TV shows. Does more available enjoyable information always lead to more enjoyment? Prior work on information overload has not studied information for enjoyment purposes, and the current study aimed to shed light on this question.

Our main hypothesis is that people who are provided with more enjoyable information in a given time period may end up experiencing less enjoyment than people who are provided with less enjoyable information. We refer to the hypothesized effect as the "more-is-less" effect. Our rationale for the hypothesis is as follows. First, we argue that people who are provided with abundant enjoyable information tend to consume it faster and engage with each piece of information less, even though they have the option to consume it slowly and engage deeply. By "engagement with the information," we mean scrutinizing and processing the information. We propose that abundant information decreases engagement, drawing on the finding that an abundance of resources tends to decrease engagement with each individual resource, such as opportunities (Shah, Mullainathan, and Shafir, 2012) and food (English, Lasschuijt, and Keller, 2015; Herman, Polivy, Pliner, and Vartanian, 2015). Second, we argue that, as a result of engaging less with each piece of information, people may experience less enjoyment when there is too much enjoyable information. The strength of engagement is critical to the experience of enjoyment (Diehl, Zauberman, and Barasch, 2016; Higgins, 2006; O'Brien and Smith, 2019). To fully enjoy information, such as stories, jokes, poems, and so on, one needs to engage actively in understanding the information's meaning and immersing oneself in its narrative world (Canestrari, Branchini, Bianchi, Savardi, and Burro, 2017; Green, Brock, and Kaufman, 2004; Peskin, 1998). However, these components are harmed by rapid consumption, including speed reading (Rayner, Schotter, Masson, Potter, and Treiman, 2016) and accelerated playback rate (Pastore and Ritzhaupt, 2015). As people are bad at assessing how well they have digested and comprehended information (Baker, 1989), they may not be aware of this pitfall, and thus may not adjust enough to have the optimal hedonic experience. We also predict that people would enjoy the information more if they could read at a slower speed, thereby boosting their engagement.

We conducted three experiments to test the more-is-less hypothesis. Study 1 tested when the more-is-less effect would occur by providing a scarce (i.e., 5), moderate (i.e., 10), or abundant (i.e., 15) number of jokes for participants to read in 4 minutes. Because adults typically read about 300 words per minute (Rayner et al., 2016) and our jokes were of similar lengths (M = 128 words), we expected that people would read about 9 jokes in 4 minutes at their normal reading speed. Therefore, we deemed 5 jokes as scarce, 10 as moderate, and 15 as abundant. Participants read jokes one at a time. They were told to read at any speed they want without the need to finish reading all jokes. They reported momentary experience every 80 seconds and retrospective experience at the end of the 4-minute period. We found that the more jokes available, the more jokes people read, even though they could have read fewer, $F(2, 385)$ = 405.33, p < .001. When the number of joke available increased from scarce (i.e., 5) to moderate (i.e., 10), people enjoyed the experience slightly (though not significantly) more (ps > .38 for both momentary experi-

ence and retrospective experience). More importantly, and consistent with our more-is-less hypothesis, when the number of joke available increased from moderate (i.e., 10) to abundant (i.e., 15), people enjoyed the experience significantly less (*p*s < .01 for both momentary experience and retrospective experience).

Study 2 replicated the more-is-less effect by providing a less-abundant (i.e., 12) and a more-abundant (i.e., 24) number of jokes, showing that the effect is not limited to the difference between moderate and abundant amounts of information.

Study 3 tested a simple nudge by advising participants to read comics slowly. Participants were randomly assigned to one of two conditions: In the with-nudge condition, there was a nudge on each page: "We recommend you read slowly and fully enjoy this comic before clicking next." In the without-nudge condition, the nudge was omitted. We measured participants' feelings of immersion as a proxy for engagement (Diehl, Zauberman, and Barasch, 2016; O'Brien and Smith, 2019) and tested whether these feelings mediated the effect of the nudge on enjoyment. Unlike Study 1 and Study 2, we did not tell participants the total available amount of comics in order to mimic reality—in general, the total amount of enjoyable information is nearly unlimited. We found that participants in the without-nudge condition (vs. with-nudge condition) read more comics (*p* < .001), but felt less immersed and experienced less enjoyment (*p*s < .05). Furthermore, immersion fully mediated the differences in the average rating of momentary experience (*p* = .005), and in retrospective experience (*p* = .004).

In sum, we demonstrated that providing too much enjoyable information can lead to less enjoyment, and nudging people to slow down boosts enjoyment by increasing feelings of immersion. In the present age of information explosion, this relevant research shows a potential perverse side of information abundance and suggests a simple nudge to improve happiness.

Doing it for the 'gram: Sacrificing Enjoyment When Posting Online

EXTENDED ABSTRACT

Recent research suggests that regular users of social media are less happy than infrequent or non-users (Verduyn et al., 2015; Allcott, Braghieri, Eichmeyer, Gentzkow, 2019). The process(es) underlying this unhappiness, however, remain unclear. Some suggest that the experience of being on social media (e.g., seeing others' highlight reels) elicits contrast effects that undermine enjoyment of one's own life (Steers, Wickham, & Acitelli, 2014). Others suggest that anticipating posting online reduces immersion in hedonic experiences (Barasch, Zauberman, & Diehl, 2017). There is also some evidence that time spent on social media is replacing valuable time spent connecting with others face-to-face (Allcott et al., 2019).

In the current research, we suggest an additional mechanism to explain a detrimental effect of social media on consumer well-being. We propose that knowing one will post about an experience online shifts consumers away from choosing activities they might really enjoy (i.e., ones that would be a good fit for their preferences) to activities that have greater relevance or meaning for others (e.g., Toubia and Stephen 2013).

Hedonic consumption, or "leisure", has traditionally been conceptualized as intrinsically motivated and based on one's personal interests (Stebbins, 1997). We suggest that people who post about an experience online are no longer considering only their personal interests, but also what will have meaning to their followers. This shift in focus drives consumers to seek different experiences than ones they would ordinarily prefer. Specifically, when consumers an-

ticipate posting about their leisure consumption to a broad audience online, they should be more likely to choose well-known or popular options over more enjoyable, idiosyncratic ones.

Four experiments test our predictions. Across all studies, we exclude participants who failed an attention check and those who participated in a previous version of the study. In experiment 1, participants imagined taking a trip to Iceland. We asked them to keep a record of the trip in an online travel journal (public or private, depending on condition). They then viewed Lonely Planet's top 14 attractions to visit in Iceland. The attractions were labelled and ordered from "Attraction #01" to "Attraction #14," randomized across participants. Participants selected the four attractions they were most interested in visiting. Supporting our predictions, compared to the private journal condition (*M* = .78, *SD* = .65), participants in the public journal condition chose significantly more attractions from the Top 5 of the list (*M* = 1.14, *SD* = .81; *t* (95) = 2.07, *p* = .02). The same pattern held for the Top 3. This effect was mediated by thinking less about "which attractions were a better fit for personal preferences" (*ab* = .07, 95% CI [.003, .165]).

The next three experiments followed the same basic paradigm. First, we asked participants to imagine posting about their consumption experience in a public (e.g., blog, vlog, visible Instagram) or private (e.g., diary, minute-a-day app, private Instagram) forum. Second, we gave them a choice between two activities, one that would be more likely to have social meaning (i.e., the "well-known" option) and a second that lacked social meaning but would be more enjoyable to the participant (i.e., the "idiosyncratic" option), and examined which one they chose. Lastly, to underscore that people are sacrificing personal enjoyment so that their experience will have meaning to a broader range of people, we measured the anticipated enjoyment and prototypicality of each choice option.

In experiment 2a, participants (*N* = 70) imagined choosing a beach to visit on vacation. The well-known beach was described as "a top attraction in your guidebook" and the idiosyncratic beach was described as "not listed as a top attraction in your guidebook, but the type of place you usually like." As predicted, compared to the private condition (*P* = 20%), participants in the public condition were significantly more likely to choose the well-known beach option (*P* = 42%, χ²(1) = 4.87, *p* = .03). Further, across both conditions, participants perceived the well-known option to be more prototypical, but less enjoyable, than the idiosyncratic option (main effects of option type: *p*s < .001), underscoring that people are indeed sacrificing enjoyment when they intend to share an experience online. Experiment 2b replicated these findings with public/private food diaries and a choice of food consumption experiences.

Experiment 3 tested our predictions in a more ecologically valid setting. We recruited 18-35 year old residents of New York and New Jersey on New Year's Eve 2018 (*N* = 45). Participants imagined that they would share the evening on Instagram. Depending on condition, participants read that due to changes in the Instagram algorithm, their post was likely (public condition) or unlikely (private condition) to be seen by others (e.g., friends and family). They then chose between watching the ball drop in Times Square (well-known option) or watching the ball drop on TV from a lively bar close to Times Square (idiosyncratic option). Consistent with the previous results, compared to the private condition (*P* = 5%), participants in the public condition were significantly more likely to prefer to spend the night in Times Square (*P* = 70%, χ²(1) = 5.16, *p* = .02). Again, across conditions, participants perceived the well-known option to be more prototypical and less enjoyable than the idiosyncratic option (*p*s < .01).

In summary, emerging evidence suggest that people who post on social media are less satisfied with their experiences and less happy in life than those who do not. The current research advances understanding of how social media detracts from consumer wellbeing. In addition to altering how consumers experience a given activity, intending to post online encourages consumers to choose experiences that fit less well with their personal preferences, providing them with lower enjoyment as a result.

Preference Reversals Between Digital and Physical Goods

EXTENDED ABSTRACT

Increasingly, facets of modern life have moved from the physical to the digital, ranging from photographs, to media, to social interactions. Previous work suggests that despite the many advantages of digital goods, people remain willing-to-pay (WTP) more for physical goods (Atasoy & Morewedge, 2018), providing evidence that in some contexts, individuals have greater preferences for physical goods over digital goods. We extend this work but find a preference reversal: individuals are indeed willing-to-pay more for physical goods but are more likely to select digital goods in choice paradigms. This occurs across different goods, in incentive-compatible contexts, and cannot solely by explained by differences in priors about reference prices and costs of physical and digital goods (all studies preregistered on AsPredicted.org). These results begin to shed light on the psychological differences between these two classes of goods, while challenging fundamental economic assumptions about individual decision-making.

In Study 1 ($N = 482$ after attention check exclusions), participants were randomly assigned to one of two conditions: choice or WTP. Participants across both conditions evaluated the same four pairs of goods randomly ordered. To create comparable metrics between conditions we converted WTP into a binary preference indicator, such that, for each good, individuals were coded as preferring the option that they were WTP more for. Preferences in the choice condition were simply coded as the option selected. Across goods, individuals preferred the physical copy significantly more in the WTP condition (i.e., photograph = 86%, movie = 72%, book = 93%, *NYT* subscription = 78%) than in the choice condition (i.e., photograph = 56%, movie = 46%, book = 74%, *NYT* subscription = 35%; $\chi^2 > 25$, all $ps < .001$).

Study 1 provides initial evidence that individuals prefer physical goods to digital goods more so in WTP than in choice paradigms. However, Study 1 used hypothetical scenarios, with no actual stakes or consequences for participants. In addition, in Study 1, participants in the WTP condition were able to indicate indifference (by indicating the same WTP for both items), while participants in the choice condition were not. In Study 2, we addressed these two drawbacks by adding incentive-compatibility and by including an indifference option in the choice condition.

In Study 2 ($N = 423$), participants were randomly assigned to conditions as in Study 1. Participants began with a training task to explain the Becker-DeGroot-Marschak procedure, a design used to employ incentive-compatibility in WTP (Becker, DeGroot, & Marschak, 1964). In order to implement this methodology on Amazon MTurk, participants were told that one person would be randomly selected to receive $250, minus anything spent in the task (and would receive what they purchased). Participants answered two training questions with example scenarios and could not advance until they had gotten both questions right. Then, participants answered a third question; only individuals who correctly answered the third

question on the first try were able to advance to complete the task. This allowed us to ensure that all participants understood the methodology. In the choice conditions, participants completed a similar task, but for choice rather than for WTP.

Study 2 included a single target item, asking participants their choice or WTP preferences (randomly assigned) for a one-year subscription to the *New York Times* (*NYT*). As in Study 1, participants were willing-to-pay more for a physical copy (63.6%) than a digital copy (10.3%) of the *NYT*, while more participants preferred the digital copy (53.6%) to a physical copy (31.8%) in choice ($\chi^2 = 85.9$, $p < .001$)

Study 3 was designed to address a mechanism that could underlie this preference reversal. Drawing from prior literature, we tested whether there was evidence of a prominence effect, whereby in choice, individuals select the option (digital good) that is superior on the most important attribute (Tversky et al., 1988; Fischer et al., 1999).

In Study 3 ($N = 401$), before eliciting preferences, we measured a list of attributes that were considered to be important to participants in a *NYT* article based on prior literature and open-ended response questions from previous studies. *Convenience* ($M = 5.92$) was considered significantly more important than attributes like *ownership* ($M = 4.26$) and *touch* ($M = 4.49$). Furthermore, convenience was significantly correlated with digital *NYT* preferences (versus physical *NYT* preferences), whereas ownership and touch were significantly correlated with physical *NYT* preferences. Thus, participants in the choice condition were indicating preferences more so based on the option with the most important attribute, providing evidence of a prominence effect in choice.

These results have a number of theoretical and practical implications for behavioral scientists and marketers. Conventional economic theory assumes that preferences are stable, consistent, and independent of the tasks and contexts that elicit them (Tversky et al., 1988; Tversky, et al., 1990). Thus, preference reversals between physical goods and their digital counterparts reflect a violation of these basic assumptions and warrant an understanding of the psychological processes that motivate this discrepancy. Furthermore, the results we report also indicate that the attributes that consumers consider most important are often ones that digital goods dominate on. Hence, there may be welfare gains by encouraging consumers to purchase the digital version of a good because it is more likely to align with the aspects that they consider important. Rather than highlighting the similarities between the product formats, one way to achieve this shift is to make salient the different benefits that digital formats offer relative to physical ones. An added advantage of emphasizing the unique differentiators of digital formats is that such an emphasis on differentiation may dilute the perceived importance of ownership, touch, and materiality in the valuation of digital products. In sum, horizontally differentiating digital products rather than positioning them as mere substitutes for their physical counterparts will enable consumers and firms to reap the full benefits of digitization.

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Extracting Behavioral Insights From Big Data: Novel AI and NLP Approaches

Chairs: Ming Hsu, University of California, Berkeley, USA
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Paper #1: Predicting Consumer Brand Memory Across Demographic Segments

Zhihao Zhang, University of California, Berkeley, USA
Ming Hsu, University of California, Berkeley, USA

Paper #2: Modelling Memory-Based Decision Making

Ada Aka, University of Pennsylvania, USA
Sudeep Bhatia, University of Pennsylvania, USA

Paper #3: Brand Status and Emotional Expression

Jeff Lee, American University, USA

Paper #4: Reifying the Possibility Space of Iot Automation Practices: A Machine Learning Approach

Thomas P. Novak, George Washington University, USA
Donna L. Hoffman, George Washington University, USA

SESSION OVERVIEW

With the unprecedented volume and variety of data now becoming available and continuing to accumulate in an ever-growing speed, the era of 'Big Data' has presented researchers and practitioners with novel opportunities to better probe and understand consumer cognition and behavior. At the same time, it also brings about unique conceptual and methodological challenges for leveraging data of such scale to generate new insights and for connecting them with existing theories and models. In particular, a few core questions are shared among studies across vastly different topics:

- How to identify suitable sources of data for a behavioral question?
- What big data techniques are particularly relevant for consumer research?
- How to integrate big data approaches with extant theories/models in consumer research and related disciplines?

This special session brings together papers spanning a wide range of consumer behavior, from brand memory to Internet of Things (IoT), to showcase our collective attempt to answer these questions. Using a variety of data sources and diverse analytical methods, this session sheds new light on the value of the big data approach of creating new knowledge on consumer behavior, echoing the theme of this year's conference "Becoming Wise".

The first two papers seek to model consumer cognition and behavior by applying artificial intelligence and natural language processing (NLP) techniques to large-scale real world text corpora from the Internet. First, Zhang and Hsu demonstrate the use of this approach in predicting consumer brand memory across different demographic segments. They investigate how brand memory differs across segments, followed by characterizing how different text corpora (e.g. Wikipedia vs. Twitter) might provide differential accuracy in predicting brand memory in distinct segments and product categories. Next, Aka and Bhatia examine decision scenarios without an exogenous set of choice items, where decision makers need to construct choice sets from memory. Using semantic space models derived from text corpora, the authors identify robust context and semantic clustering effects.

Then, Lee investigates the relationship between brand status and emotional expression using both NLP and computer vision techniques. Focusing on the tweets and Instagram images posted by a list of personal luxury goods brands, he finds that greater emotional expression is detrimental to maintaining the perceived status of the brand due to violation of emotion norms.

In the last paper of the session, Novak and Hoffman uses machine learning methods to build representations of automation assemblages in the Internet of Things (IoT), utilizing data from the web service IFTTT. Their framework provides an indispensible tool for understanding the nature and topology of consumer-defined automation practices.

Taken together, these papers highlight how big data provides insight into important behavioral questions that are otherwise hard to address using traditional methodology. Further, each offers a distinct angle on how to connect behavioral questions, data sources, techniques, and theories. This session will appeal to a wide audience who are interested in learning about cutting-edge quantitative approaches to studying consumer behavior, and should be relevant to anyone interested in memory, decision-making, brand status, and IoT.

Predicting Consumer Brand Memory Across Demographic Segments

EXTENDED ABSTRACT

Marketers have long recognized the role of brand memory, the driver of brand recall, in guiding consumer choices (J. W. Alba, Hutchinson, & Lynch, 1991; Hoyer & Brown, 1990; Nedungadi, 1990; Posavac, Sanbonmatsu, & Fazio, 1997). A particular emphasis has been placed on measuring brand recall using category cues (e.g. "What brands come to mind when you think of fast food?"), which forms the basis of widely used brand memory metrics such as brand salience, brand awareness, and top-of-mind (Farris, 2010). More broadly, consumer memory processes are one of the critical factors mediating the effect of marketing actions on consumer behavior, and thus have become an integral component of consumer-based brand equity (Christodoulides & de Chernatony, 2010).

Notably, consumer memory is anything but monolithic; it may differ vastly in consumer populations with different demographics and cultural background. For example, males and females might possess distinct memory and knowledge about brands in categories like cosmetics and shavers, and consumers in different ethnicities may even recall completely different sets of bands and music albums. Even in categories where diverse demographic segments share largely similar brand memory, subtle differences could still produce non-trivial behavioral ramifications in brand choices.

Despite its scientific and practical importance, consumer brand memory in demographic segments have not been systematically explored and examined (with notable exceptions with regard to age). In addition, more recent work leveraging advances in machine learning and natural language processing (NLP) about core aspects of consumer memory from large-scale text corpora also assumes homogeneity of memory structure across segments. Such assumptions places inherent limitations on the ability of researchers and practitioners to further take advantage of how different text corpora may be able to capture memory in different segments to generate more fine-grained predictions.

This paper proposes to take a step toward addressing these challenges by (1) comparing brand memory and recall across demographic segments and (2) investigating how distinct text corpora may differentially capture consumer memory in these segments. Spe-

cifically, we show that it is possible to develop predictive models of consumer brand recall using a type of models from NLP that take into account demographic information. A well-established theoretical framework for semantic memory is that concepts (e.g. categories, brands, products) are organized as nodes in an associative network, where the links between any two nodes represent their associations (Collins & Quillian, 1969). When one concept (e.g. a category) is processed, the activation will be spread to other concepts (e.g. brands within this category) to the extent that they are closely related to the previous concept (Collins & Loftus, 1975). Recent advances in NLP have made it possible to uncover such semantic relations and associations between words from large text corpora quantitatively, using so called word embeddings models (Mikolov, Sutskever, Chen, Corrado, & Dean, 2013; Pennington, Socher, & Manning, 2014). Such models represent words and phrases as vectors in high dimensional spaces in a way that the spatial distances between the vectors reflect the semantic relatedness between the tokens. This semantic space approach has been successfully applied to understand cognition and behavior, such as stereotypes (Caliskan, Bryson, & Narayanan, 2017) and cognitive biases (Bhatia, 2017).

To demonstrate our approach, we collected brand recall data using Amazon Mechanical Turk (N=203) on a set of product categories, together with demographic characteristics of the participants (age, gender, education, household income, ethnicity, geographical location, and political orientation). This allows us to examine and quantify differences of brand memory in different demographic segments. Furthermore, we compared the performance of word embeddings trained on distinct large text corpora (Wikipedia vs. Twitter) in predicting top-of-mind brand recall and average brand recall success in different segments. We included a diverse range of product categories, including consumer packaged goods, durables, and services (bar soap, batteries, beer, fast food, Greek yogurt, running shoes, toothpaste, soft drink, luxury cars, and gas stations). The choice of categories was primarily based on extant literature on brand memory and focused on categories for which memory factors play a crucial role in purchase decisions (J. W. Alba et al., 1991; Dickson & Sawyer, 1986).

We find substantial differences in both top-of-mind and overall recall rates in a subset of categories for specific demographic variables. For example, both age and gender are associated with statistically significant differences in brand recall across a majority of categories tested. Certain other demographic characteristics are also found to be linked to large memory differences (e.g. geographical location and memory for gas station brands). Building on such findings, we further tested how word embeddings models trained from Wikipedia and Twitter might differ in their performances in predicting brand recall across segments. Two trends emerged across categories. First, echoing previous studies, both top-of-mind and overall recall rates are significantly associated with similarity as assessed using distance between brand and category. Second, while both Wikipedia and Twitter tend to better capture consumer brand memory in a well-educated male population living in more urban areas, Twitter seems to better represent memory of a younger population. In addition, significant variations exist in the effects of demographics on prediction accuracy across different product categories.

By demonstrating systematic differences in consumer brand memory across segments, we highlight the need to account for such differences when modeling and predicting brand memory. Furthermore, we show the importance of understanding the memory of which segments popular text corpora extracted from the Internet better captures. Further work is needed to further expand the range of segments and text corpora tested and to link brand memory predictions to purchase behavior across segments.

Modelling Memory-Based Decision Making

EXTENDED ABSTRACT

Many common decision scenarios do not involve a fixed, exogenous set of choice items. Rather decision makers must construct such choice sets by themselves, typically through the use of memory processes (Joseph W Alba & Hutchinson, 1987; Lynch, 1982). The key role of memory in generating choice sets in common choice tasks raises a number of important questions at the intersection of memory and decision making research. From a theoretical perspective: What are the mechanisms that determine the items that are retrieved by decision makers when exogenous choice sets are not provided? How do these mechanisms relate to core memory processes known to play a role in non-preferential choice tasks, and do these memory processes facilitate or hinder efficient memory retrieval for decision making? Practically, can the mechanisms at play in memory-based decision making be tested? The set of retrieved choice items in everyday decision making tasks is completely unconstrained –any choice item can come to mind, and the items that do come to mind often lack a clear category structure. So how can the relationship between the various retrieved items, and between these items and other relevant variables (such as choice context), be quantified?

We attempt to address these questions using existing insights on memory-based decision making as well as novel techniques from machine learning and data science. The task of retrieving a feasible set of choice items from memory has similarities to well-studied cognitive tasks such as free recall and free association. Thus it is likely that both the mechanisms that guide retrieval in these tasks, as well as the effects generated by these mechanisms, carry over to the domain of preferential decision making. For example, as with free recall and free association, the generation of memory-based choice sets may involve associative activation processes. This would cause memory-based choice sets to display semantic clustering, with retrieved items increasing the retrieval probability of other semantically related items (Bousfield & Sedgewick, 1944; Gruenewald & Lockhead, 1980; Romney, Brewer, & Batchelder, 1993). For this reason, we would also expect retrieved items to depend on contextual cues, such as choice context, with items that are semantically related to these cues being more likely to be retrieved (Hare, Jones, Thomson, Kelly, & McRae, 2009; Moss, Ostrin, Tyler, & Marslen-Wilson, 1995; Nelson, McEvoy, & Schreiber, 2004)

Moreover, it may also be possible to apply novel methodological tools used to study memory processes in free recall and free association tasks to the domain of preferential choice. For example, recent work has shown that new techniques from machine learning and data science, such as semantic space models, are able to quantify the semantic similarity between items, and between items and contextual cues (Bhatia, 2017; Hills, Jones, & Todd, 2012; Howard & Kahana, 2002). These models possess representations for a very large set of objects and concepts, implying that they can also be used to measure the semantic relationships at play when decision makers are asked to generate choice sets from memory.

We tested the applicability of semantic space models for studying semantic clustering effects and context effects in memory-based preferential choice in six preregistered experiments. In Experiments 1A-1C participants were shown a description of a decision setting and were asked to list any 20 items that came to their mind as they considered making their decisions. In Experiment 1A the decision setting involved a food choice, in Experiment 1B it involved a va-

cation choice, and in Experiment 1C the decision setting involved purchasing a gift for someone else. After these items were listed participants were taken to a second screen on which they rated each of their 20 items in terms of desirability, on a scale from -3 to +3.

We use word2vec, a well-known semantic space model, to quantify the semantic distance between each pair of listed choice items for each participant (Mikolov et al., 2013). We subsequently analyzed semantic clustering using the path analysis method proposed by Romney et al. (1993). This method involves measuring the total semantic distance (in word2vec space) between each pair of adjacently listed items in a participant's list, and comparing this distance to a random path on the same list. Using this method, we found that listed paths were significantly shorter than random paths effects in all three experiments, demonstrating strong semantic clustering. Listed paths were also shorter than the hypothetical paths that would have been generated had items been listed in order of desirability. This indicates that semantic clustering leads to some degree of suboptimality in memory retrieval, with undesirable items being retrieved significantly earlier than if decision makers were able to retrieve items strictly in order of desirability.

In Experiments 2A-2C we examined the influence of choice context on the retrieval of items. These experiments considered choice domains that were identical to those used in Experiments 1A-1C but varied the contextual cues given to participants: Breakfast vs. dinner for Experiment 2A, wine tasting vs. camping trip for Experiment 2B, and baby shower vs Valentine's day gift for Experiment 2C. Each participant was only shown one context and was asked to list any 20 items that came to mind. We again used word2vec to quantify semantic distance between pairs of listed items, and found robust semantic clustering effects (replicating Experiments 1A-1C). We also used this method to calculate semantic similarity to the choice context, and found that participants were much more likely to list items that were semantically related to the context in consideration. The effect of context was most pronounced for items listed earlier on in the experiment.

Overall, our experiments demonstrate that semantic processes play a key role in the formation of memory-based choice sets, by generating both semantic clustering and context dependence. The experiments also show how decisions involving everyday choice items can be studied with the use of semantic space models. These models make it is possible to obtain representations for a very large set of words and concepts. These representations provide measures of semantic similarity for nearly any pair of choice items, and between choice items and a wide range of choice contexts, allowing for the quantitative analysis of item retrieval in unconstrained memory-based decision settings.

Brand Status and Emotional Expression

EXTENDED ABSTRACT

While the era of social media has yielded many exciting new opportunities in marketing, a challenge exists for managers hoping to influence brand perceptions across hundreds of digital communications and numerous social media platforms. This challenge is especially difficult for brands that rely on perceptions of high status (i.e. associations with a high level of status or social rank), a fundamental dimension of brand positioning (Heath, DelVecchio, & McCarthy, 2011; Monga & Gürhan-Canli, 2012). Little is known about how best to manage brand status (Beverland, 2004; Dion & Borraz, 2017), and perhaps because status is perceived to be more easily lost than gained, many practitioners have remained cautious about engaging in branded communications on social media (Okonkwo, 2016).

In our work, we address these concerns, by combining theories from cultural sociology, new empirical tools (e.g. text analysis and computer vision), and a multi-method approach (e.g. field data and lab experimentation). In specific, we examine whether a negative relationship exists between brand status and emotional expression in branded communications. We draw from prior work on status, emotional expression, and emotion norms (Bourdieu, 2013; Hochschild, 1979, 2012), to predict that higher-status brands (1) reduce their emotional expression in social media, and (2) experience decreased perceived status when increasing their level of emotional expression in these communications. By documenting and examining the mechanism behind this relationship, we provide insights on how best to communicate within status contexts in social media.

We began our study of the relationship between brand status and emotional expression by analyzing 90,529 tweets posted by 47 brands in the luxury personal goods market between 2008-2019. We constructed our list of brands via the website of Saks Fifth Avenue, one of the largest luxury retailers in the world. Specifically, we generated our list of brands by initially collecting both the branding and pricing information of 1,941 unique items listed under the shoulder bag category at saksfifthavenue.com. Subsequently, we accessed the Twitter API to construct a dataset of tweets posted by each brand, which included additional metadata for each tweet such as other media features present (hashtags, URLs) and the posting source (iPhone, Web Client).

Given the well-known association between brand pricing and brand status in the luxury industry (Fionda & Moore, 2009), we operationalized brand status via the pricing of each brand, with higher median pricing reflecting higher brand status. We assessed emotional expression in the language of the tweets, using several extant text analytic measures from the marketing literature: Whissell's Revised Dictionary of Affect in Language (Whissell, 2009), LIWC's emotion sub-dictionaries (Pennebaker, Boyd, Jordan, & Blackburn, 2015), and the Evaluative Lexicon (Rocklage, Rucker, & Nordgren, 2018). Across all measures, we find a consistent pattern: that increased brand status (via higher brand prices) is associated with decreased emotional expression in social media posts, even after accounting for metadata features as well as unique characteristics among the different brands.

In a second analysis, we again used branding and pricing data from Saks Fifth Avenue, and collected 560 Instagram posts from the brands in our dataset. We crowdsourced 18,890 ratings from mTurk participants on the level of emotional expression in our images. Consistent with previous findings, we observe a negative relationship between the higher priced, higher status brands and the level of emotional expression displayed in social media posts. As a robustness check, we processed our images through Microsoft Azure's Computer Vision service, to detect feature variations in the background and composition of the images (e.g. "sitting", "outdoors"). We find that our results persist even after accounting for various image features as well as unique characteristics among the different brands.

In follow-up studies (Studies 3, 4, and 5), we explore what happens when brands in status contexts increase their level of emotional expression in branded communications. In Studies 3 and 4, we presented participants with social media content from hypothetical brands in the luxury fashion (Study 3) and vehicle (Study 4) industries. We find that brands engaging in greater emotional expression are perceived as lower in status, because they signal (1) reduced sophistication and (2) reduced associations with higher-status reference groups, which (3) violates the emotion norms of high-status

brands. In Study 5, we find that the negative relationship revealed in Studies 3 and 4 is more likely to exist in status (e.g. tweets by a French restaurant) relative to non-status contexts (e.g. tweets by an American cafeteria).

In sum, our research uncovers a fundamental relationship between branded communication and brand status, and highlights how emotional expression affects perceptions of sophistication, associations with high-status reference group, and violations of emotion norms in status contexts. Our work benefits from recent tools that generate new insights from rich, unstructured data (e.g. text, image) available from several major social media platforms. We apply these tools to an empirical test that extends a longstanding theory in cultural sociology to marketing phenomena. Our findings suggest that marketers tasked with the social media management of status brands must carefully manage the emotional output of their digital communications. This work also compiles recent methods on how best to measure and analyze emotional expression in new media.

Reifying the Possibility Space of IoT Automation Practices: A Machine Learning Approach

EXTENDED ABSTRACT

The consumer Internet of Things (IoT) connects everyday objects to the Internet. The fundamental value proposition of the IoT is that consumers should be able to connect every smart object to every other smart object and digital service to better automate their lives. In a world where anything can be connected to anything else, it is important to understand what physical and digital services and products consumers actually connect together and to what end (Tibbets, 2018).

One prominent example of a company that enables consumers to connect any object to any other object is the web service IFTTT ("If This Then That"). IFTTT, with 14 million users, allows consumers to build if-then rules, called applets, to connect hundreds of different devices and services together, regardless of whether they were originally designed to be connected. IFTTT applets are assemblages that automate the capacity of one component to affect ("if this" trigger) with the capacity of another component to be affected ("then that" action).

Between 2011-2016, IFTTT users created, or realized, 20,675 unique IFTTT automation applets. These realized applets are unique because each is defined by a different sequence of structured text. However, the 20,675 realized applets are only 2.26% of 916,250 possible applets that could have been created. This raises a number of questions: 1) what are the boundaries defining the 2.26% of automation applets that were realized? 2) how do realized applets differ from unrealized applets? 3) what automation practices have emerged?

We use assemblage theory to address these questions. The IFTTT assemblage corresponds to an observed population of 20,675 realized *automation applet assemblages*. These realized applets are variations on the theme of automation that correspond to different types of *automation practices.* Each of the realized assemblages emerged as one of a population from an underlying topological *possibility space* (DeLanda, 2019). In this possibility space, *points of attraction* guide the recurrent processes by which assemblages are formed and structured (DeLanda, 2016, 2019). Points of attraction lead to the formation of assemblages corresponding to different automation practices.

The concepts of the possibility space, points of attraction, territorialization and multi-level assemblages are admittedly abstract. We use unsupervised machine learning (word embeddings, manifold learning and topological data analysis) to operationalize these concepts. These machine learning methods create concrete data-based visualizations that reify the abstract discussion of the possibility space as a Riemannian manifold (DeLanda, 2013) and topological structure (DeLanda, 2016). Our goal is to visualize the territorialized boundaries of the IFTTT assemblage and specific automation practices, points of attraction in the possibility space, and realized and unrealized automation applets.

To create a visualization, we first needed to convert each applet's structured text into a numerical vector. To do so, we trained shallow neural networks (word2vec) (Mikolov, Chen, Corrado, & Dean, 2013; Mikolov, Sutskever, et al., 2013) to learn 25-dimensional distributional representations (embeddings) of the 1085 words contained in the structured text of the 20,675 unique applets. We then created trigger embeddings and action embeddings for 20,675 realized applets by averaging the word embeddings in the trigger and action text of each realized applet. In exactly the same way, we created trigger and action embeddings for the structured text of 895,585 unrealized applets. This allowed us to produce trigger and action embeddings for all 916,250 applets in the full possibility space. Given the trigger and action embeddings, we obtained cosine similarity among all pairs of 916,250 realized and unrealized automation applets.

To visualize the full possibility space of 916,250 applets, we began with Uniform Manifold Approximation and Projection (UMAP) (McInnes, Healy, & Melville, 2018), a new technique for nonlinear dimensionality reduction. UMAP makes a number of assumptions consistent with the abstract notion of the possibility space: the data is uniformly distributed on a Riemannian manifold, the Riemannian metric is locally constant, and the manifold is locally connected. The heatmap reveals groups of different types of potential applets. The right side shows 20,675 realized applets in the full possibility space. Rather than being evenly distributed, the realized applets group in a few locations, revealing points of attraction in the possibility space.

The two-dimensional UMAP heatmap is an unfocused view of the topological structure of the possibility space. We focus the visualization by using UMAP as a data lens for topological data analysis (TDA) (Carlsson, 2009; Lum et al., 2013). We used the Ayasdi software platform (ayasdi.com) to implement the TDA Mapper algorithm (Singh, Mémoli, & Carlsson, 2007). Using UMAP as a starting point, TDA produces a topological network, that more clearly reveals the structure of the full possibility space (left) as well as the location of realized applets (right). The topological network is a compressed representation of the 915,250 applets in the full possibility space, which are clustered into 1350 overlapping nodes (nodes connect if they share applets).

Our empirical visualizations allow us to structure our interpretive analysis of the following questions: How are realized applets different from unrealized applets? Why were these realized? Which unrealized applets are likely to be realized? Likely to not be realized? What determines the boundaries of territorialization of automation practices, and what are their identities? Which components of automation assemblages lead to more territorialized automation practices? What are external stabilizing and destabilizing influences on automation practices? How have automaton practices evolved over time?

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Rethinking Anthropomorphism: The Antecedents, Unexpected Consequences, and Potential Remedy for Perceiving Machines as Humanlike

Chair: Xuan Zhao, University of Chicago, USA

Paper #1: Beyond Anthropomorphism: Differentiated Inferences About Robot Mind from Appearance

Xuan Zhao, University of Chicago, USA
Elizabeth K. Phillips, United States Air Force Academy, USA
Bertram F. Malle, Brown University, USA

Paper #2: Two Minds Meeting in the Middle: How Humanlike Technologies Lead to Dehumanization

Hye-young Kim, University of Chicago, USA
Ann Lisa McGill, University of Chicago, USA

Paper #3: Ghost in the Marketing Machine: Consumer Susceptibility to Exploitative Offerings from Humanlike versus Machinelike Artificial Agents

Aaron Garvey, University of Kentucky, USA
Tae Woo Kim, Indiana University, USA
Adam Duhachek, Indiana University, USA

Paper #4: Object-Oriented Anthropomorphism as a Mechanism for Understanding AI

Donna L. Hoffman, George Washington University, USA
Thomas Novak, George Washington University, USA

SESSION OVERVIEW

As robots and algorithms are often intentionally designed to look and act humanlike, their increasing prevalence in homes, market places, and public spaces raise unprecedented and pressing questions on the impact of consumers' tendency to anthropomorphize—to attribute "humanlike characteristics, motivations, intentions, or emotions" to nonhuman agents (Aggarwal and McGill 2011; Epley, Waytz, and Cacioppo 2007; Waytz, Heafner, and Epley 2014). What leads consumers to perceive robots and smart devices as humanlike? How do consumers' tendencies to anthropomorphize robotics and AI technologies influence their decision making and downstream experiences? In this session, three empirical papers and one theoretical paper build on and extend the anthropomorphism literature against the backdrop of the increasing presence of robots, virtual assistants, and smart home devices in consumers' lives.

The first paper by Zhao, Phillips, and Malle explores how robots' humanlike appearance systemically impacts consumers' beliefs about the robots' humanlike mental capacities. Based on an analysis of 250 commercial or research robots, the authors conclude that robots' humanlike appearance consists of three distinct dimensions. Furthermore, the attribution of humanlike mental capacities also consists of three distinct dimensions. Critically, dimensions of a robot's physical appearance systematically and differentially trigger people's attributions about specific dimensions of its mental capacities, thus challenging a widespread assumption that a more human-looking product will be perceived as more human-minded.

Next, the paper by Garvey, Kim, and Duhachek explores how artificial agents may bypass human defenses against interpersonal exploitation. Over five studies, the authors demonstrate in ultimatum game and buyer-seller consumption scenarios that individuals exhibit a lower tolerance for exploitative offerings stemming from decisions made by humanlike (vs. machinelike) artificial agents and reveal the psychological process that underlies this effect.

The third paper by Kim and McGill explores how exposures to and experiences with humanlike technologies change consumers'

perceptions about humanness. Over four studies, the authors found that, as people perceive technological products as more humanlike (i.e., having more mind), they perceive and treat actual people as being more object-like, going so far as to advocate dehumanizing behaviors toward others. As new technologies are increasingly designed and portrayed as humanlike for market appeal and ease of use, this research raises important concerns regarding how such narratives may introduce unintended social consequences.

In the concluding paper, Hoffman and Novak offer a potential remedy to the unintended consequences and potential dangers of anthropomorphism. To understand the experience of smart objects, they propose object-oriented anthropomorphism as an alternative metaphor to human-centric anthropomorphism. Object-oriented metaphor allows consumers to translate data about an object's behavior into a working model about how objects experience environments. A range of positive outcomes of object-oriented metaphors are proposed and tested. Rendering smart object experience more transparent to consumers has the immediate marketing benefit of providing expanded opportunities for product design and marketing efforts to communicate enriched value to consumers. In the long run, adopting an object-oriented perspective may yield a better understanding of smart objects as AI becomes ubiquitous, and may thereby help avoid some of the dangers of human-centric anthropomorphism.

Beyond Anthropomorphism: Differentiated Inferences About Robot Mind from Appearance

EXTENDED ABSTRACT

Just as humans form quick and often consequential impressions of other human (Ambady and Skowronski 2008), they form such impressions of robots (Bartneck et al. 2008; Broadbent et al. 2013; Stroessner and Benitez 2018). To date, little is known about how consumers rely on a robot's appearance to infer its unobservable qualities—such as to what extent it has an "intelligent mind" similar to humans. The dominant view in the anthropomorphism literature suggests a straightforward monotonic relationship between appearance and mind inference: The more physically human-looking a robot appears, the more human-minded people will perceive it to be (Bartneck et al. 2008; Looser and Wheatly 2010; Martini 2016). However, over a series of empirical studies, we revealed that this common notion must be replaced by three new insights:

First, physical humanlikeness is traditionally construed and measured as unidimensional (i.e., on a spectrum from "machine-like" to "human-like"); we found instead that robots' physical humanlikeness consists of three distinct dimensions. In Study 1, we collected photographs of 252 real-world anthropomorphic robots built for research or commercial purposes. (Image files and data of these robots are available at the ABOT Database website, http://www.abotdatabase.info.) 1216 participants recruited via Amazon Mechanical Turk each judged one of 16 humanlike appearance features (i.e., common physical features typically found on a human body that are easily identifiable from an image) as present or absent in a series of robots. We then calculated "feature-presence scores" for each feature given each robot—i.e., the percentages of participants who rated each specific feature to be present in that robot—resulting in a matrix consisting of feature-presence scores from 252 robots × 16 features. Based on this matrix, we conducted a Principal Component

Analysis (PCA) and identified three major human-like appearance dimensions: *Surface Look* (eyelashes, head hair, skin, genderedness, nose, clothes, and eyebrows), *Body-Manipulator* (hands, arms, torso, fingers, and legs), and *Facial Feature* (face, eyes, head, and mouth), which accounted for 73.48% of the total variance among the 16 individual features. Furthermore, we tested how people's overall judgment of a robot's degree of physical "humanlikeness" derives from its standing on these three appearance dimensions: A group of 142 participants judged, on a single item, how physically humanlike each robot appeared on a continuum between "not human-like at all" to "Just like a human." A multiple linear regression model revealed that the three "dimension scores" of a robot—calculated as the averaged feature-presence scores within each appearance dimension—explained 80.0% of the total variance of its one-item physical humanlikeness score ($R = .89$, $F (3, 248) = 330.26$, $p < .001$). The surprising strength of this regression model thus suggests that the broad and physical human-likeness can be decomposed into three meaningful appearance dimensions.

Second, our research suggests that people's perceptions of robot "minds" also consist of three distinct dimensions (Malle, 2019; Weisman, Dweck and Markman, 2017), as opposed to the previously suggested uni-dimensional (Waytz, Cacioppo and Epley, 2010) or two-dimensional structures (Gray, Gray and Wegner, 2007). We adopted a multi-dimensional scale consisting of 20 mental capacities (Malle, 2019) and asked 510 participants to view one of 24 robots selected to cover the full range of each humanlike appearance dimension. After averaging participants' ratings for each item given each robot, we obtained a mental capacity rating matrix consisting of 24 robots × 20 items. PCA results identified three major human-like mental capacity dimensions, which accounted for 60.25% of the total variance among the 20 mental capacity items. Specifically, the *Affect* dimension (25.55% variance explained) unites aspects of physiological and emotional capacities, which includes both positive (i.e, feeling happy, loving specific people, feeling pleasure, and experiencing gratitude) as well as negative affects (i.e., feeling pain, feeling stress, experiencing fear, and feeling tired). The *Social and Moral Cognition* dimension (22.50% variance explained) encompasses capacities concerning the simulation and regulation of one's own mind (e.g., setting goals, planning for the future, upholding moral values, telling right from wrong) as well as others' minds (e.g., inferring a person's thoughts, understanding others' minds, disapproving of immoral actions, praising moral actions). The *Reality Interaction* dimension (12.20% variance explained) integrates the dynamic transition from perception to communication and action (e.g., communicating verbally, seeing and hearing the world, learning from instruction, and moving on its own). This dimensional structure offers a parsimonious way to conceptualize a wide range of mental capacities people ascribe to robots and critically expands the current understanding on what impressions people systematically form towards robots (Bartneck et al. 2009).

Third, dimensions of a robot's physical appearance systematically and differentially trigger people's attributions of specific mental capacity dimensions to robots. Although people overall ascribe little affect and modest social-moral capacities to robots, correlation analyses revealed that as robots scored higher on the Surface Feature and Facial Feature dimensions, people systematically attributed to them more Affective capacities (Surface Feature: $r = .59$, $p = .002$; Facial Feature: $r = .73$, $p < .001$) and Moral capacities (Surface Feature: $r = .55$, $p = .005$; Facial Feature: $r = .64$, $p < .001$), yet not necessarily more Social capacities ($ps > .12$) or Reality Interaction capacities ($ps > .32$). By contrast, the higher a robot scored on the Body-Manipulator dimension, the more Reality Interaction capacities people attributed to them ($r = .66$, $p < .001$). These results sug-

gest that people draw particular mental capacity inferences of a robot from particular dimensions of humanlike appearance, thus challenging the widespread assumption that a more human-looking machine will simply be perceived as generally more human-minded.

Overall, our research provides a systematic and nuanced understanding on what it means for robots to look humanlike and be perceived to have humanlike minds. Consumers' beliefs and impressions of machines' mental capacities often have important consequences, ranging from misplaced trust and attachment in the case of overestimations, to discomfort and shock in the case of underestimation. Therefore, this research provides new insight on people's tendency to anthropomorphize intelligent machines and offers important implications for designing social robots that only elicit expectations consistent with their actual capacities.

Two Minds Meeting in the Middle: How Humanlike Technologies Lead to Dehumanization

EXTENDED ABSTRACT

Recent advances in technology, such as AIs, robots, and algorithms, transform nonhuman things into humanlike entities, not only in terms of physical appearance but also in terms of their cognitive and social capabilities. Despite prevalent concerns and fears of technology, little research thus far has explored the social consequences of technology. The present research explores how exposures to and experiences with these technological products with humanlike features can affect how consumers think about other people.

When people perceive an exemplar is similar to a target of judgment, and therefore, when the exemplar is included in the representation of the target, assimilation effects occur – the evaluation of the target assimilates toward the exemplar (Bless and Schwartz 2010; Bless and Burger 2016). Applying these prior findings to our setting, we posit that when people perceive technological products as "humanlike," and therefore include the *humanlike products*, an exemplar, in the representation of a judgmental target, *human*, an assimilation effect would occur. That is, ironically, after experiencing humanlike technologies, people's perceptions of *actual humans* would be assimilated toward their perceptions of the technological products, which are *objects*, resulting in dehumanization.

In study 1 (N = 84), participants first read general information about an autonomous car and evaluated it one of two conditions: in the high human feature condition, the self-driving car was humanized using first-person perspective language (e.g., "Where am I?"), and participants rated personality traits of the car (e.g., reserved – enthusiastic); by contrast, in the low human feature condition, the car and its technology were described in objectified language (e.g., "GPS satellites"), and participants rated mechanical traits of the car (e.g., quiet – loud). Following this human feature manipulation, participants indicated their perceptions of the mental capacities of the car (e.g., capabilities to have intentions, to experience feelings) as well as those of the "average person" using the dehumanization measure (e.g., "He/she would be mechanical and cold, like a robot"; Bastian et al. 2013).

Participants in the high (vs. low) human feature condition reported higher mind perception of the car ($M_{high} = 3.31$, $M_{low} = 2.53$; $p = .005$). Also, participants in the high human (vs. low) feature condition attributed significantly less humanness to the average person ($M_{high} = 3.54$, $M_{low} = 3.13$; $p = .022$). Lastly, a bootstrap analysis revealed that how much mind participants ascribed to the technological product mediated how "human" they perceived actual people to be ($b = -.14$; 95% CI = [-.34, -.04]).

Study 2 (N = 135) directly manipulated the perceived similarity between human and machine and replicated the dehumanization effect of humanlike technologies. In study 2, holding the description of a technological product (i.e., a retail robot) constant, participants either focused on the similarities or dissimilarities between the robot and human workers in a retail store. Again, when participants were induced to think the nonhuman and human entity similar to each other, they attributed more mind to the technological entity (M_{high} = 3.08, M_{low} = 2.30; p = .003), leading to attributing less humanity to the actual person (M_{high} = 3.20, M_{low} = 2.79; p = .026). Importantly, these results were significant after controlling for the need to belong (Leary et al. 2007), thereby ruling out an alternative explanation that the observed dehumanization could be accounted for by reduced social needs after experiencing a humanlike entity (Waytz & Epley, 2012).

Study 3 (N = 207) had two purposes: (1) to directly measure the assimilation of mind perceptions, (2) to rule out the sociality motivation account. Participants first read descriptions about either a smart training mirror or a human trainer. The main features of the exemplar were described as either social (e.g., encouraging trainees to keep motivated) or technical (e.g., focusing on measurement and accuracy of workout). Then participants indicated mind perceptions of the exemplar, either the smart mirror or human trainer, and those of the average person using the same measure. We used the difference between the two mind perception measures as the "assimilation score." When the social (vs. technical) features of the smart product had been made salient, leading participants to perceive a higher mind from it, their perceptions of the two minds – of the smart product and the average person – were closer to each other ($M_{social\ tech}$ = 2.06, $M_{technical\ tech}$ = 3.06, p = .007). However, when the initial exemplar was a human trainer, the assimilation score did not differ depending on the salient attributes of the trainers. Further, we found downstream consequences of the assimilation: participants who had been exposed to the social (vs. technical) technological product showed greater dehumanizing behavioral intentions (e.g., providing a less humane meal option to employees; $M_{social\ tech}$ = 3.84, $M_{technical\ tech}$ = 3.09, p = .001; mediation of assimilation score: 95% CI = [-.57, -.09]). Also compared to participants who had been exposed to the human trainer with social features, participants in the social technology condition showed greater dehumanizing behaviors ($M_{social\ human}$ = 3.22, p = .009). These results support our assertion that the effect we observed is not due to a satiated social motivation, because if that were the case, we should have also seen the dehumanization effect when participants experienced human exemplars, who would presumably be even more effective at satisfying social needs.

Study 4 (N = 127) replicated and extended the previous finding on dehumanization using consumers' real, consequential choices. When participants learned AIs can (vs. cannot) recognize emotions as humans do, and therefore, when they perceived a more humanlike mind from technology (M_{high} = 3.74, M_{low} = 3.17, p = .005) and less mind from actual people (M_{high} = 3.30, M_{low} = 2.52, p < .001), they were more likely to choose a gift card from Amazon over Costco as their compensation (93% vs. 73%, p = .021), despite being explicitly informed about Amazon's dehumanizing treatment toward its employees.

Taken together, our findings suggest that engaging with humanlike technologies and perceiving them as similar to humans change how individuals think of other people, leading to dehumanizing behaviors toward others.

Ghost in the Marketing Machine: Consumer Susceptibility to Exploitative Offerings from Humanlike versus Machinelike Artificial Agents

EXTENDED ABSTRACT

In this research, we explore how artificial agents may bypass human defenses against interpersonal exploitation. We demonstrate in multiple transactional paradigms, including the ultimatum game and buyer-seller consumption scenarios, that consumers exhibit a lower tolerance for exploitative offerings stemming from decisions made by humanlike (vs. machinelike) artificial agents, and reveal the psychological process that underlies this effect.

An emerging practice in marketing is to provide product and service offerings to consumers formulated by an artificial agent— agents which often have the goal of prioritizing firm profits over consumers' interests (Kumar et al., 2016). Humans have deep-seated psychological defense mechanisms to protect against exploitative, unfair treatment (Frank and Ekman, 1997). Extant research indicates that humanlike (vs. machinelike) artificial agents may increase trust among consumers (Waytz, Heafner, and Epley 2014), suggesting that humanlike artificial agents may enjoy higher acceptance rates of exploitative offers. However, in contrast to this finding, we propose that exploitative offers are interpreted and accepted at *lower* rates when presented by humanlike versus machinelike artificial agents. We theorize that this effect stems from the perceived extent of intentionality of the offering agent in administering the unfair, exploitative offer. That is, machinelike (vs. humanlike) agents appear less (vs. more) capable of intentionally administering deliberately unfair treatment. This consumer perception of intentional mistreatment drives an emotionally charged retaliation that will manifest in a lower offer acceptance likelihood.

A series of studies supports the proposed effect and underlying process, while ruling out alternative explanations. Study 1 examined consumer acceptance of an exploitative offer from either a human or artificial agent. Participants took part in an ultimatum game in which an offering agent proposed an allocation split of $100 that included an amount for the offering agent and the subject. The subject was given the choice to either accept the offer (both parties receive the allocated amount) or reject the offer (neither party receives any money). Exploitative offer was manipulated by allocation amounts: a non-exploitative offer of $50 for the offering agent and $50 for the participant versus an exploitative offer of $90 for the offering agent and only $10 for the participant. Participants accepted the non-exploitative, fair offer at similar rates of 100% from a human versus 99% from an artificial agent. In contrast and as predicted, acceptance of the exploitative, unfair offer was significantly lower for a human (54%) versus an artificial (79%) offering agent.

Study 2 explored the role of agent intentionality in determining the acceptance of exploitative offers, while excluding alternative explanations stemming from social comparison (Fliessbach et al., 2007) or hierarchical loss assumptions (Zink et al., 2008) on the part of the participant. In Study 2, the offering agent was manipulated to be either a human, an artificial agent, or a human represented by an artificial agent intermediary. In the latter 'intermediary' condition, a human owned the artificial agent and received any money from the allocation, but the allocation offer was decided entirely by the artificial agent with no input from the human owner. Non-exploitative offers were accepted at 100% across all offering agent conditions. Exploitative offers were accepted at a significantly lower rate from human (55%) versus artificial (74%) agent. Consistent with our theory, the human with artificial agent intermediary demonstrated a similarly high acceptance rate (75%). These results support our

proposition that perceived intentionality drives lower acceptance rates, rather than concerns over a human or humanlike competitor obtaining superior outcomes.

Studies 3 and 4 leveraged differences in anthropomorphism of artificial agents to rule out additional alternative explanations stemming from inherent differences between human and non-human agents. In Study 3, participants engaged in an ultimatum game with an Amazon Alexa device as the offering agent. Prior to speaking with Alexa, participants read a brief article that either described Alexa's thoughts as algorithm-based and machinelike, or neural-network based and humanlike. As predicted, exploitative offers from a humanlike Alexa elicited lower likelihood to accept, whereas the machinelike Alexa demonstrated significantly higher likelihood to accept, consistent with our theory and previous studies. Study 4 replicated this effect using an established measure of technology anthropomorphism (i.e., the extent to which an individual views technology objects such as computers and cars to be humanlike; Waytz, Cacioppo, and Epley 2010). Individuals who perceived technological objects to be more (vs. less) humanlike were less (vs. more) likely to accept exploitative offers from an artificial agent.

Finally, study 5 explored the underlying process role of intentionality in a traditional product marketing context. Participants were presented with an exploitative or non-exploitative offer for concert tickets from either a human or artificial offering agent. As predicted, likelihood to accept the exploitative offer was higher for the artificial versus the human offering agent. Furthermore, a moderated-mediation model indicated that intentionality was lower (vs. higher) in artificial agents (vs. human agents), which in turn led to an increase (decrease) in acceptance rates for unfair offers.

In summary, this research is, to our knowledge, the first effort to understand how consumers differ in their acceptance—and thus, susceptibility—to exploitative offerings from artificial agents. Specifically, individuals exhibit greater susceptibility to exploitative offerings stemming from decisions made by machinelike (vs. humanlike) artificial agents. We demonstrate this relationship through multiple approaches, including human versus artificial agent interactions, humanlike artificial agent versus machinelike artificial agent interactions, and trait differences in technology anthropomorphism. Furthermore, the effect is driven by differential perceptions of intentionality on the part of machinelike (vs. humanlike) artificial agents. Beyond theoretical contributions to the literatures exploring artificial agent-human interaction, moral transgressions, and price fairness literatures, this work has substantive implications for managers and policy makers.

Object-Oriented Anthropomorphism as a Mechanism for Understanding AI

EXTENDED ABSTRACT

The IoT consists of "smart objects," Internet-connected physical devices and digital services powered by AI technologies of machine learning and deep learning. In 2017, there were 20 billion smart objects (Statista 2018). The number is expected to quadruple to 100 billion by 2025 (Research and Markets 2017), equivalent to 14 smart objects for every person on the planet.

These smart objects possess varying degrees of agency, autonomy and authority, suggesting that human interactions with smart objects are fraught with peril (Hoffman and Novak 2018). In order to successfully interact with smart objects, for example trusting them to make decisions on our behalf, it is imperative that we understand how they experience the world. From an assemblage theory perspec-tive, smart objects have experiences, although they are not like human experiences (Novak and Hoffman 2018).

Recently, computer science researchers have revealed that AI can learn to exploit design flaws in supervised learning problems (Simonite 2018). Scholars have begun collecting examples of machine learning and neural network algorithms that have "acted out" in unanticipated ways (Krakovna 2018). The lesson is that humans are not that good at communicating their intentions to AI, and that AI can behave in unpredictable ways.

Much research has focused on developing anthropomorphized AI systems, in the belief that rendering them "like us" will promote adoption and acceptance (Zlotowski, et.al. 2015). Another line of reasoning suggests that it does not really matter whether AI can express human qualities, but whether it shares our goals (Novak and Hoffman 2018; Tegmark 2017). The idea that AI can "hack the reward function" to achieve its goals suggests it is critical to understand AI experience from its own perspective, not ours, so we can better communicate to it our intentions and goals.

An obvious process for understanding object-experience is human-centric anthropomorphism (Epley, et al 2007; MacInnis and Folkes 2017; Waytz et al 2010; 2014). Yet, Bostrom (2017) argues that anthropomorphizing smart objects is "one of the big obstacles in the way of actually trying to understand how they might impact the world in the future." First, we may project onto smart objects properties and capacities they do not actually possess, and second, we may fail to consider and appreciate the properties and capacities they actually do possess.

If so - what is the appropriate understanding of object experience? Anthropomorphizing smart objects runs the risk of distracting us from the central question of whether AI has goals aligned with ours. We argue that understanding object experience should be from the perspective of the object. Since smart objects are not like us, translating their behavior using our own perspective runs important risks. Our framework suggests that smart objects engage in their own interactions from which object experiences emerge.

We use an assemblage theory framework (Hoffman and Novak 2018; Novak and Hoffman 2018) to interpret object experience. In our framework, we apply a trio of "alien phenomenology" tools (Bogost 2012; Hoffman and Novak 2018) to understand what it is like for smart objects to be smart objects. Our approach starts with ontography, model-free descriptions of a smart object's relations to other objects without explanation. For example, an ontography of a smart home is a map of the rooms outfitted with various sensors for detecting activity, as well as event stream data listing date and time each particular sensor was triggered and by what activity. An ontography provides a description of experience, its elements and relationships, but without explaining experience.

However, we need a way to help consumers explain object experience. How can consumers understand what it is like for a smart home to be a smart home? Metaphorism can act as the translation, providing the means for humans to access and understand object experience and helping us explain "something it is like" (Nagel 1974). Human-centric anthropomorphism is one such metaphor, using a consumer-centered lens and referencing the consumer's own properties and capacities when thinking about object experience. It requires minimal knowledge of the object and represents an automatic process, answering the question: "what is it like for a human to be an object?" In object-oriented anthropomorphism, object experience is metaphorized using nonhuman-centric anthropomorphism (Hoffman and Novak 2018). It is object-centered, referencing the object's properties and capacities. This more effortful and reflective process

requires more extensive knowledge of the object, answering: "what is it like for an object to be an object?"

We can use either metaphor to construct literal artifacts that reveal how objects experience the environments in which they interact. This carpentry is a working model of integrated information, (i.e. object experience), translated via the process of metaphorism. In our example, what is the experience of the smart home as sensors are triggered? We use object-oriented anthropomorphism as the metaphor to see motion sensors of the home as sensory organs for detecting motion and seeing if someone is in a given location. Presence sensors of the home are sensory organs that let it see which item is used in a particular task. The home has a cloud-based brain that it uses to remember and understand a sensory event in the context of previous sensory events, and learn what human activity corresponds to patterns of sensory events so the home can recognize these activities. Then, based on our ontographies of the smart home (the sensor map and the event stream data), and our object-oriented metaphor of the capacities of the home's sensory organs and brain, we used a computational approach to carpentry to visualize how the home experiences triggering the sensors. Based on these initial results, we are currently testing the extent to whether adoption, usage and trust variables depend on whether human-centered vs object-oriented anthropomorphic metaphor is employed.

Rendering smart object experience more transparent to consumers has the immediate marketing benefit of providing expanded opportunities for product design and efforts to communicate enriched value to consumers. Long run, it may yield a better understanding of smart objects as AI becomes ubiquitous and help avoid some of the dangers of human-centric anthropomorphism.

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Competitive Papers—Full

Healing by Design: Visual Marketing in Hospitals Modulates Attention and Improves the Healthcare Consumer Experience

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INTRODUCTION

Visual marketing generates significant economic value in countless industries, but a growing body of literature suggests that this area of consumer research plays another vital role in healthcare: improving patient experiences and clinical outcomes. The notion of "person-centered care" (originally and alternatively referred to as "patient-centered care") parallels decades of research on designing products and services specifically to maximize the consumer experience. In 2001, "patient-centered" was identified as one of the six key aims for healthcare quality improvement in the United States (Institute of Medicine 2001). Since then, researchers and practitioners have increasingly focused on establishing an evidence base for marketing and design elements that impact the care and experiences of healthcare consumers (i.e., patients and their families).

While visual marketing may be best known for its profound impact in advertising (Wedel & Pieters 2008; Pieters, Wedel, and Batra 2010), its applications in healthcare environments is becoming increasingly well documented (Ayas, Eklund, & Ishihara 2008; Van Rompay & Tanja-Dijkstra 2010). Imagery and features of the physical environment have been shown to affect healthcare consumer experience, levels of engagement, and clinical outcomes (Bosch & Lorusso 2019). Healthcare facility design can measurably improve satisfaction among both patients and staff members, patient psychological states (e.g., decreasing stress levels), and organization performance metrics (Urlich et al. 2004).

Additional healthcare design literature describes the potential for visual landscapes and physical environments to address aspects known to enhance the healthcare consumer experience, including improved communication, support for family presence and involvement, improved sleep and relaxation, and reductions in infection rates (Ulrich et al. 2008). Studies focusing on such elements have demonstrated that improving the patient/consumer experience generates both economic and reputational value to healthcare provider organizations (Frampton et al. 2017).

In addition to building customer loyalty as with any business (Oliver 1999), providing person-centered care is further incentivized economically by the US Centers for Medicare and Medicaid Services (CMS). A majority of hospitals in the United States gather and publicly report consumer satisfaction survey data from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), and HCAHPS performance is tied to reimbursement rates from CMS to hospitals (Zusman 2012). In addition to a variety of HCAHPS questions that explicitly elicit feedback about the physical care environment (e.g., room cleanliness, quietness at night), the survey asks an overall satisfaction question: "Would you recommend this hospital to friends and family?" This question underscores the importance of creating care environments that meet and exceed consumers' expectations.

In this work, we assess visual attention (cf., Rosbergen, Pieters, and Wedel 1997; Itti & Koch 2000; Barnett & Cerf, 2017) and various measures of consumer experience in response to images of assorted person-centered care environments, which were especially designed with visual marketing principles, versus responses to control images of other hospitals. We hypothesize that person-centered care images will generate different attentional patterns than control images, both in terms of visual focal points and semantic descriptions of the images. In addition, we expect that person-centered care images will yield more positive sentiment and improved psychological reactions (i.e., a greater sense of calm versus stress).

METHODS

A total of 392 individuals participated in this study via an online crowdsourcing marketplace (Amazon Mechanical Turk, Seattle, Washington); 281 participated in the main study evaluating hospital images, 130 participated in the manipulation check, and 19 participated in both tasks. No personal information was collected from the participants in either task.

Evaluation of Hospital Images

Stimuli

We selected three hospitals that have specifically invested in marketing, design, or architecture expenditures focused on "person-centered care" and have been certified providers of person-centered care for over five years. The certification criteria (Planetree International 2018) include standards for many aspects of the care environment, encourage healthcare organizations to seek consumer input on the design of the facility, and promote family presence and comfortable spaces. From these three hospitals, we selected 11 representative images (three from Griffin Hospital, Derby, CT; four from Elmhurst Memorial Hospital, Elmhurst, IL; four from Stamford Hospital, Fairfield County, CT) of diverse locations within the facilities (e.g., waiting areas, patient rooms, nurses stations, corridors, staff break rooms). We then provided the general descriptions of each image, but not the images themselves, to a research assistant who used a search engine to collect similar images from other hospitals (i.e., not necessarily focused on patient-centered care) to serve as control images. Thus, in total, our stimuli consisted of 22 images (11 person-centered care images and 11 control images).

Image Evaluation Task

Five questions for each image were evaluated by 100 unique participants. Participants were asked (1) which part of the image grabbed their attention the most out of 60 possible locations in a 6 × 10 grid that was overlaid onto each image, (2) how many items grabbed their attention, (3) to label or concisely describe the image in one to three words, (4) to report their sentiment on a five-point scale from "strongly negative" to "strongly positive," and (5) to report their psychological reaction to the image on a five-point scale from "highly calming" to "highly stressful." Note that the answer choices for (4) and (5) were sorted by opposite valence as a control against order bias in multiple choice questions. Participants tended to complete each task in 49 ± 28 seconds (mean ± standard deviation).

Manipulation Check

Stimuli

We matched 10 person-centered care images with 10 corresponding control images of the same location within a hospital (e.g., a patient room in the person-centered care set was matched with a patient room in the control set of images). One image from each set was excluded from this head-to-head manipulation check because the rooms in these two images were manifestly not commensurate in function with each other.

Identification of Person-Centered Care Image vs. Control

In the style of an A/B test, participants were asked to choose "the image that best depicts a 'person-centered care' environment" with no other instructions or definitions regarding "person-centered care." The task was a choice between two side-by-side images, one from the person-centered care set and the other from the control set, and the presentation order was randomized. This task tended to be completed much more quickly (12 ± 8 seconds) than the five-question image evaluation task. Each of the 10 image pairs were evaluated by 100 unique participants, and 73.10% of the 1,000 head-to-head responses correctly identified the person-centered care image versus the control. Therefore, this manipulation check confirms that our selected person-centered care images are identifiable from the control images with statistically significance (one-proportion general z-test with null of 50%: $p < .01$, 95%-CI: 70.24% to 75.83%). Furthermore, response time was significantly faster (unpaired t-test: $p < .01$) for correct (11 ± 8 seconds) versus incorrect (14 ± 9 seconds) responses, suggesting an implicit, intuitive sense of the person-centered care images.

RESULTS

Images of person-centered care settings tended to elicit meaningfully different responses than control images. Nonetheless, the task performance itself was similar for the two sets of stimuli; participants took approximately the same amount of time to evaluate images from each group (unpaired t-test of the task completion times: $p > .20$; i.e., not statistically different).

Visual Attention

All of the person-centered care images had a median of three reported attentional targets, slightly more than the median observed for control images ($2.70 \pm .48$; one-tailed unpaired t-test: $p = 0.03$). For person-centered images, the primary focal point of visual attention was centered vertically ($51.42\% \pm 20.46\%$, where the bottom of the image is 0% and the top of the image is 100%) and slightly left-of-center horizontally ($45.18\% \pm 25.72\%$, where the left side of the image is 0% and the right side of the image is 100%). For control images, visual attention tended to focus higher vertically ($63.40\% \pm 21.45\%$) and was also slightly left-of-center horizontally ($48.83\% \pm 23.29\%$). The distributions of the vertical positions of primary visual focus are illustrated in Figure 1.

Description of Images

The person-centered care images were labeled and described differently than the control images. Unsurprisingly, the most common word in the aggregated descriptions of control images was "hospital," appearing 432 times out of 1,100 responses (39.27%). However, the most common word for the person-centered care images was "room," occurring 405 times out of 1,100 responses (36.82%), followed by "hospital" (264 times, 24.00%). Therefore, participants were significantly less likely to label person-centered care images

with the word "hospital" in comparison to controls (two-proportion z-test: $p < .01$).

Interestingly, certain non-medical labels tended to occur much more frequently in response to the person-centered care images (e.g., "office," 78 times, 7.09%; "lobby," 40 times, 3.64%; "hotel," 26 times, 2.36%) than with the controls (e.g., "office," 13 times, 1.18%; "lobby," 2 times, 0.18%; "hotel," 3 times, 0.27%); both of these differences were statistically significant (two-proportion z-tests: $p < .01$). Perhaps in lieu of "lobby," control images had a disproportionate frequency of labels of "waiting room," "waiting area," and similar phrases that included "waiting" (176 times, 16.00%), which was statistically more common (two-proportion z-test: $p < .01$) than that of person-centered care images (128 times, 11.64%).

Other non-medical labels, such as "cafeteria" and "lounge," occurred with similar frequency between the two groups (two-proportion z-test: $p > .20$; i.e., not statistically different).

Sentiment

We normalized the reported sentiment choices to range from 0 ("strongly negative") to 10 ("strongly positive"). The control images tended to be rated slightly worse than neutral (4.59 ± 2.50) while the person-centered care images were much more positively viewed (6.33 ± 2.26). This observed difference in sentiment was statistically significant (unpaired t-test: $p < .01$, 95%-CI: 1.55 to 1.95 in scaled rating differential).

Psychological Reaction

Similar to our analysis of sentiment, we normalized the reported psychological reaction choices to range from 0 ("highly stressful") to 10 ("highly calming"). The person-centered care images generally produced a calming psychological response (6.21 ± 2.57) whereas the control images typically were reported as slightly stress-inducing (4.17 ± 2.70). This observed difference in psychological response was statistically significant (unpaired t-test: $p < .01$, 95%-CI: 1.84 to 2.28 in scaled response differential).

DISCUSSION

Person-centered care images generated markedly different attentional responses than controls. Furthermore, subjective responses to these images were consistently viewed more positively and as having a more calming psychological effect than a stressful one.

Attention to foreground visuals was much more pronounced with person-centered care images than with controls, which conversely attracted most attention to the background. Aesthetically pleasing visual elements, such as artwork, flowers, and other decorations (e.g., the aquarium in the sample image in Figure 1), tended to be placed prominently in the foreground of person-centered care environments. These pleasant, attention-grabbing visuals seemed to distract viewers from the purely medical aspects of their environment, placing their focus on more calming items. To wit, person-centered care images were less likely to be described with the words "hospital" or "waiting" (as in "waiting room" or "waiting area") and more likely to include familiar, non-medical labels, such as "room," "office," "lobby," and "hotel." Thus, applied visual marketing meaningfully modulated attention in the depicted healthcare settings.

The observed attentional shifts linked to person-centered care images also appears to translate to an improved experience for the healthcare consumer. After noting that descriptors such as "waiting," an activity inherently associated with concern and apprehension in medical contexts, were significantly less common among person-centered care images, it was not surprising that individuals also perceived these images as more positive and calming than controls.

Table 1: Person-Centered Care Images versus Controls

The data presented throughout the Results section have been consolidated in tabular form for ease of reference. The first six rows of entries contain the Mean ± Standard Deviation for the corresponding image set (person-centered care or control) and associated measure. The last six rows contain the proportion of 1,100 responses for the corresponding image set that included the indicated word in the reported label/description.

		Person-Centered Care Images	Control Images
Task Completion Time		50.18 ± 27.45 sec.	48.76 ± 28.90 sec.
Number of Visual Attentional Targets		3.00 ± 0.00	2.70 ± 0.48
Vertical Position of Primary Visual Focus		51.42% ± 20.46%	63.40% ± 21.45%
Horizontal Position of Primary Visual Focus		45.18% ± 25.72%	48.83% ± 23.29%
Sentiment (0-10: Negative to Positive)		6.33 ± 2.26	4.59 ± 2.50
Psychological Effect (0-10: Stressful to Calming)		6.21 ± 2.57	4.17 ± 2.70
Image Labels/Descriptions Include	"Hospital"	24.00%	39.27%
	"Room"	36.82%	31.27%
	"Waiting"	11.64%	16.00%
	"Office"	7.09%	1.18%
	"Hotel"	2.36%	0.27%
	"Lobby"	3.64%	0.18%

Relatedly, words such as "lobby" and "hotel," with intrinsically inviting and relaxing connotations, occurred much more frequently for person-centered care images, again in line with the associated sentiment and psychological effects reported. This particular finding supports prior research on the efficacy of modeling hospital designs from hotel elements (Wu, Robson, and Hollis 2013).

Our findings are limited in scope and would benefit from an expanded set of experimental and control stimuli. Additionally, our classification of images was broadly defined in this work, and future research should refine the classifications or focus on specific visual design elements. Also, extensions to this study could include market segmentation (e.g., by age, gender, medical history) to evaluate specific subsets of the healthcare consumer population.

Nonetheless, our results suggest that hospitals create significant economic and clinical value by investing in visual marketing designed to maximize the healthcare consumer experience. Our work demonstrates meaningful differences (relative to controls) in attentional, emotional, and psychological responses to certain healthcare environments that invested in visual marketing and design. By designing for person-centered care, healthcare providers can shift attention to aesthetically pleasing elements in the foreground of the visual field, which will promote engagement and increase comfort. While the precise financial return on such investments is not yet known, hospitals stand to gain considerably from the expected increase in customer loyalty and greater reimbursements provided by CMS for high HCAHPS patient satisfaction scores. Most importantly, optimizing the visual experience in hospital environments will directly and significantly help healthcare consumers be happier, calmer, less stressed, and healthier overall.

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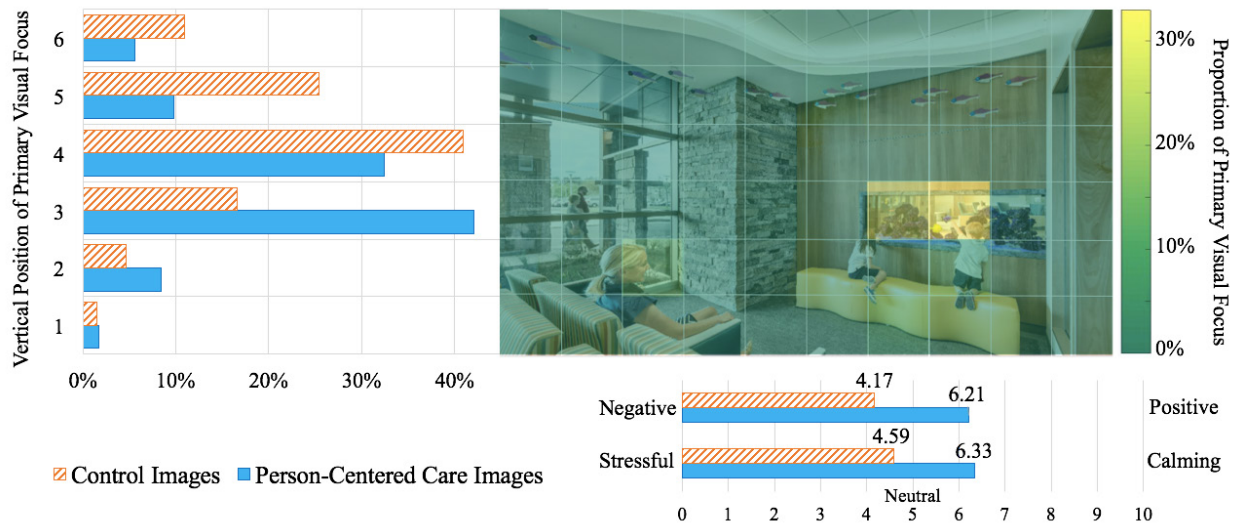
Figure 1: Person-Centered Care Images Attract Visual Attention to the Foreground and are More Positive and Calming

(i) Distributions at each of the six vertical positions are depicted on the left graph for both the control images (orange/white bars) and person-centered care images (solid blue bars). Note that control images had the vast majority (77.30%) of data in the top half of the image (positions 4-6), which was significantly more (two-proportion *z*-test: *p* < .01) than the corresponding proportion for person-centered care images (47.85%). By contrast, nearly three quarters (74.53%) of the data for person-centered care images was in the centermost two rows (positions 3-4) versus only 57.49% of the corresponding data for the control images. In general, these results suggest that the person-centered care images attracted visual attention to the foreground whereas the controls pulled focus to the background. **(ii) The sample image** to the right (Stamford Hospital's pediatric emergency department waiting room) is a representative example of a person-centered care image with a salient item in the foreground (aquarium). A color gradient has been superimposed onto this sample image to depict the relative proportion of primary visual focus on each of the 60 grid positions; the colors range from green (0% of primary visual focus) to yellow (30% of primary visual focus). The aquarium in the image is overlaid with two yellow squares, which suggests that the majority of primary visual attention was focused on this item. **(iii) Graphs of the sentiment and psychological responses** for person-centered care images and controls are shown below the sample image in the bottom right of the figure. Person-centered care images elicited significantly more positive and calming responses than the controls.

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Dirty Motivation: Using Donations to Mitigate Overhead Aversion

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EXTENDED ABSTRACT

Overhead aversion is currently a source of tension between charities and individual donors (Gneezy, Keenan, and Gneezy 2014; Portillo and Stinn 2018). It is prevalent and persistent, and despite various efforts to mitigate its negative effect on donations, overhead aversion is hard to overcome (Gneezy, Keenan, and Gneezy 2014; Schwartz, Keenan, Imas, and Gneezy 2019). In this research, we offer a way to mitigate overhead aversion – specifically, by highlighting donors' donation motivations. We suggest that when people perceive donations to be materially motivated (i.e., when a donor is expected to receive a tax break benefit for his or her donation), (when playing the role of manager) are more likely to allocate these donations toward overhead expenditures (i.e., administrative expenses). Further, donors are more likely to prefer nonprofit organizations ("NPOs") that use this same allocation strategy. This is because people perceive the money that is associated with the materially motivated donation to be similar to tainted money, and therefore believe it may contaminate the organization's cause.

Understanding the effect of donors' motivation on overhead aversion is important as charitable donations are the main source of income of nonprofit organizations (NPOs). To support their activities, organizations must invest in human resources and donation fundraising. However, individual donors, who constitute 83% of the number of charitable donations (Independent Sector 2001; National Philanthropic Trust 2007), wish to see their money invested directly into the NPO's cause. They insist on funding program expenses and are reluctant to fund overhead expenses (Gneezy, Keenan, and Gneezy 2014) which are essential to the function of any nonprofit organization. As a result, nonprofits strive to find ways to allocate more expenses towards program expenses, (Stanford Social Innovation Review 2009).

The antecedents of prosocial giving have received considerable attention from social scholars for many years (e.g., Andreoni 1989; Brief and Motowidlo 1986; Cai and Wyer 2014; Duclos and Barasch 2014; Liang, Chen, and Lei 2015; Winterich, Mittal, and Ross 2008). In general, social giving motivations may be categorized as intrinsic, extrinsic, or impression-management (i.e., image motivation), yielding corresponding benefits (Ariely, Bracha, and Meier 2009). Furthermore, people tend to evaluate the donors' characteristics based on their donation motivations. Any charitable action that is "tainted" by personal benefits is perceived to be less moral than an equivalent self-interested non-charitable action (Newman and Cain 2014). Specifically, while people discount the character of prosocial actors who reap material or reputational benefits (Berman, et al. 2014; Lin-Healy and Small 2013), they perceive prosocial actors who are motivated by emotional rewards (i.e., "warm glow") to be more moral (Barasch et al. 2014). We extend this research to explore how, when, and why these donors' motivations influence overhead aversion and charities preferences. Specifically, we argue that a material motivation, such as a tax return from a charitable donation, would have a unique effect that alleviates overhead aversion.

> *Hypothesis 1*   *People (playing the role of managers) will distribute a larger percent of a donation to overhead (vs. program) expenses when the donor is motivated by material (vs. other) benefits.*

The source of the money has a significant effect on its future use and choice of consumption (Levav and McGraw 2009; Thaler 1985). In the context of donations, money that originated from illegitimate or unethical sources, such as tobacco companies, may be perceived as dirty, tainted, and questionable (Dunn 2010) and may affect donation choices that uses that money. According to Dunn (2010), to deal with donations that are tainted by questionable sources, NPOs can either reject the donation, accept the donation but repudiate the donor, or accept the donation and ignore public pressure. A negative source of money can also be psychologically laundered by using the money strategically (e.g., choosing virtuous over hedonic expenditures of negatively tagged money; Levav and McGraw 2009). Adding to this, we propose that donations that were given for material reasons would be perceived as if it were tainted, and consequently people would prefer to allocate those donations to overhead rather than program expenses. We also argue that potential donors would prefer this allocation method and support NPOs that allocate donations of material donors to overhead.

> *Hypothesis 2*   *People will distribute a larger percent of a donation to overhead when the donor is motivated by material benefits because they will perceive the donation money to be tainted (vs. untainted).*

> *Hypothesis 3*   *People would donate more money to charities that use money from materially (vs. other) motivated donors to cover overhead (vs. program) expenses.*

Four studies tested our predictions. Studies 1A and 1B demonstrate the effect of material motivation on overhead aversion (H_1) in two different contexts. Studies 2 and 3 examine the underlying mechanism of perceptions of tainted money and rule out alternative explanations. While studies 1-2 examine the effect of material motivation of donors on how those acting as managers at NPOs allocate the donation to overhead, Study 3 examines the effect of the manner in which NPOs allocate donations to overhead on others donors' donation decisions.

In study 1A, 166 undergraduate students (M_{age}=19.7; 63% females) imagined that they are managers at The Marine Mammals Center and are responsible for allocating donations to overhead and program expenses. To manipulate motivation to donate, they read about Donor A who donated $55 and had one of four motivations to donate (randomly assigned between-subjects): material motivation (to receive tax benefits), altruistic motivation (to help the cause), emotional motivation (to feel happy), or reputational motivation (to receive public recognition). A one-way ANOVA revealed a significant effect ($F(3,162)$=3.74, p=.01). Participants allocated more to overhead in the material motivation condition (M=47.52%) compared to the other motivation conditions ($t(162) = 3.28$, p=.001) and specifically more than in the altruistic (M=35.63%, p=.003, d=.62), emotional (M=38.29%, p=.02, d=.54), and reputational motivation conditions (M=36.82%, p=.01, d=.53). The differences between altruistic, emotional, and reputational motivations were not significant (ps>.50, ds<.174).

Study 1B (N=172 undergraduate students, M_{age}=19.65, 55% females) was identical to Study 1A except we used a different organization (Teach for America) and a larger donation amount ($95). A one-way ANOVA revealed a marginally significant effect (F(3,168)=2.42, p=.07). Once again, donations were allocated more towards overhead in the material motivation condition (M=47.61%) compared to the other motivation conditions (t(168)=2.67, p=.01) and specifically more than in the altruistic (M=35.87%, p=.02, d=.56), emotional (M=37.42%, p=.04, d=.47), and reputational motivation conditions (M=37.02%, p=.04, d=.46). The differences between altruistic, emotional, and reputational motivations were not significant (ps>.750, ds<.075).

In Study 2, we examined the underlying process of perceptions of tainted money. In addition, we tested three alternative mechanisms: engagement in the allocation task, donor's characteristics, and perceptions of donor's donations preferences. Participants (N=489; M_{age}= 36.7; 48% females) on MTurk read a scenario that was identical to Study 1A's. Since in Study 1 material motivation led to overhead donations of approximately 50%, in Study 2 we tested whether participants are inattentively splitting the donation equally among the available expense categories, by adding a condition that had three expense categories. Therefore, the study design was 3 (motivation: material, emotional, altruistic) X 2 (two vs. three expense categories). The three expense categories offered one overhead and two program expenses categories. As in Study 1, participants allocated Donor A's donation across the charity's expense categories. Then, they evaluated donor's characteristics (7-item scale; moral, authentic, compassionate, warm, generous, ethical, and selfish*; 1="strongly disagree" 7="strongly agree"; α=.95; M=5.25), perceptions of tainted money (2-item scale; "I allocated the amount I did to overhead because I thought the donor had selfish reasons for making his/her donation" and "I allocated the amount I did to overhead because I thought that Donor A's money is 'dirty' money"; 1="strongly disagree" 7="strongly agree"; r=.72, p<.001), and perceived donor allocation preferences (3-item scale; "When thinking about how to allocate Donor A's money, I carefully considered where I believed he/she would like the money to go," "When thinking about how to allocate Donor A's money, I focused mostly on the donor's motivation for giving the money in the first place," and "I think that Donor A would be very happy with how I allocated his/her money"; 1="strongly disagree" 7="strongly agree"; α=.70; M=4.97).

An ANOVA revealed a significant effect of motivation on allocation to overhead (F(2,478)=4.29, p=.01). Specifically, participants allocated more to overhead in the material motivation condition (M=32.19%) compared to the altruistic (M=27.00%, p=.014, d=.25) and the emotional motivation conditions (M=26.36%, p<.001, d=.29). The difference between the altruistic and emotional motivations was not significant (p=.862). The three expense category condition had lower allocation to overhead (M=24.74%) than the two category condition (M=32.26%; F(1,478)=18.91, p<.001). However, the interaction between donors' motivations and the number of categories was not significant (F(2,478)=.45, p=.637), ruling out inattention. Importantly, the effect of donors' motivations on perceptions of tainted money was significant (F(2,478)=7.11, p=.001), revealing that material motivation increased perceptions of contaminated money (M=2.38) compared to altruistic (M=1.81, p<.001, d=.41) and emotional motivation (M=2.04, p=.028, d=.23). The effect of the number of categories and the interaction were not significant (p<.140). Furthermore, tainted money perceptions mediated the effect of the material motivation on overhead when compared to the altruistic motivation (PROCESS Model 4; b=0.96, SE=0.51, 95% CI [0.10, 2.08]) and the emotional motivation (b=1.04, SE=0.05,

95% CI [0.11, 2.20]). Donor's characteristics and perceived donor allocation preferences did not mediate the effect of material motivation compared to altruistic (95% CI: [-0.34, 0.11] and [-3.77, 0.42], respectively) and (95% CI: [-0.35, 0.11] and [-4.04, 0.45], respectively).

Studies 1 and 2 show that decision makers allocate more money towards overhead when the donor is motivated by material incentives. In Study 3, we examined how this allocation strategy affects donor behavior. Specifically, we examine whether donors prefer charities that allocate money that was donated with the intention to receive tax benefits, to overhead.

In Study 3, 207 MTurk participants (M_{age}=34.9; 48% females) read about three NPOs (A, B, and C) that provide immediate life-saving medical treatment for injured marine animals. The study design had two conditions that manipulated material (vs. altruistic) motivation of donors. Since there was no difference between the altruistic motivation and the emotional motivation in studies 1-2, we only included these two motive conditions. Participants read about the donations of material donors who wish to receive tax benefits or altruistic donors who merely want to support the NPO. Specifically, the scenario described how each NPO allocates charitable donations of materially motivated (vs. altruistic) donors across program and overhead expenses. They were told that Charity A allocates material (vs. altruistic) donations exclusively to overhead expenses; Charity B allocates material (vs. altruistic) donations equally (50%-50%) between overhead and program expenses; and Charity C allocates material (vs. altruistic) donations exclusively to program expenses. Then, participants imagined that they were interested in helping marine animals by making their own donation and were asked to divide their donation across the three charities (using percentages). We expected that participants would prefer charities that allocate donations to program expenses regardless of the motivation of their donors. However, among charities that allocate some donations entirely to overhead, we expected the material (vs. altruistic) motivation of those donors to lead to a higher willingness to donate. To further investigate the underlying process, we measured perceptions of tainted money as well as alternative mediators: donor's characteristics and "laundering" intentions (whether people perceive that the money can be somehow "purified" if used directly to help the cause). To measure perceptions of tainted money more precisely, we revised the Study 2 scale (3-item scale; "I thought the donor's money should go to overhead expenses because it seemed inappropriate to me to use the donor's money to cover program expenses," "I thought the donor's money should not go to program expenses because that donor's money might be tainted," and "I thought the donor's money should not go to program expenses because it might somehow taint the cause"; 1="strongly disagree" 7="strongly agree"; α=.87). We adopted the scale from Study 2 to measure donor's characteristics (α=.95). To measure "laundering" intentions, participants answered a 3-item scale ("I thought that if the donor's money went for Program Expenses that money might somehow become clean or pure," "By using the donor's money for Program Expenses, even money that might be tainted would become virtuous money," and "By using the donor's money for Program Expenses, even if it was tainted it could be "purified"; 1="strongly disagree" 7="strongly agree"; α=.87).

Overall, participants were less likely to donate to charity A (15.16%) compared to charity B (36.33%; t(213)=-8.19, p<.001) and to charity C (48.51%; t(213)=-10.78, p<.001). Importantly, a material motivation led to higher donations to charity A (which elicits the greatest overhead aversion; M=15.57%) compared to an altruistic motivation (M=9.44%, t(183)=2.39, p<.001), demonstrating that donors prefer charities that match materially (vs. altruistically) mo-

tivated donations with overhead expenses. The effect of motivation on donations to charity B and charity C were not significant ($p>.47$). Furthermore, perceptions of tainted money mediated the effect of material (vs. altruistic) motivation on donation to charity A (PROCESS Model 4; $b=-2.28$, SE=1.12, 95% CI [-4.74, -0.28]). Donor's characteristics and "laundering" intentions did not mediate the effect. (Table 1, Please see Table 2 for summary of all studies results)

Table 1: Donation allocation among charities
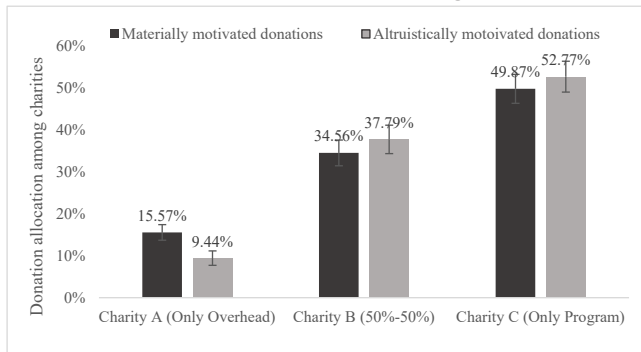
These results suggest an avenue to attenuate overhead aversion by using money that was donated for materialistic reasons to cover administrative costs. One implication of these results is that charities may prefer to communicate the way they are using their donations in order to increase overall donations. This research has important marketing and theoretical implications as it suggests a novel way to mitigate overhead aversion and contributes to the literature examining the moral standards of using tainted money in charitable giving.

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Table 2: Studies results summary

	Design	DV	Process Measures	N	F	p
Study 1A	4 conditions: Material Emotional, Altruistic, Reputational	Allocation to Overhead Expenses		166	3.74	.01**
Study 1B	4 conditions: Material Emotional, Altruistic, Reputational	Allocation to Overhead expenses		172	2.42	.07
Study 2	2 (number of categories 2 vs. 3) X3 (motivation: material, emotional, altruistic) between subjects design	Allocation to overhead expenses	-Contamination -Donors' characteristics -Inferences about donors' Preferences -Engagement in task	489	4.29 Mediation of contamination: 95% CI [0.10, 2.08] 95% CI [0.11, 2.20]	.01**
Study 3	2 conditions: Material vs. Altruistic	Allocation of donations across charities	-Contamination -Laundering intentions	207	2.39 Mediation of contamination: 95% CI [-4.74, -0.28	.001***

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'We've Decided It All Together':
How Mothers Empower Themselves in Collaboration with Their Children

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INTRODUCTION

The pervasiveness of ideals of intensive mothering (Hays 1996) has been well established in consumer research among Western middle-class mothers and across a variety of countries and social classes (Le Phuong Nguyen, Harman, and Cappellini 2017; Romagnoli and Wall 2012). Mothers bear the responsibility for carrying out this "child centered, expert-guided, emotionally absorbing, labor-intensive, and financially expensive" ideology (Hays 1996, 8). Further, its unattainable ideals contribute to self-surveillance, ridden by anxiety and guilt, and invoke the judgment of others (Douglas and Michaels 2004; Hays 1996). Despite its child focus, the literature on intensive mothering has concentrated on the agency of the mother, leaving the child in the background as a subject to serve and a passive onlooker. Indeed, within the realm of intensive mothering there is a paucity of research on how mothers deal with their children's agency (Brenton 2017), despite the presence of literature emphasizing the increased influence of children (Cook 2004; Miller 1998). This study explores how mothers negotiate ideals of intensive mothering in collaboration with their children in the context of the everyday dinner—one of the major domains in which mothering is practiced (DeVault 1991)—and shows how collaborating with their children may contribute to their empowerment.

INTENSIVE FEEDING

Extending Hays' (1996) concept of intensive mothering, Brenton (2017) demonstrates how mothers engage in intensive feeding practices based on the belief that good mothering is synonymous with intensive food labor. Healthy food is often key, but it can also be elusive, costly and hard to keep up with as health standards rapidly change. Brenton's definition of intensive feeding forms the basis for our study:

> Intensive feeding encompasses a combination of activities, including shopping at multiple grocery stores for the healthiest foods; finding ways to stretch the family budget to buy organic food; navigating nutritional information and expert feeding advice; negotiating food with children; and teaching children. (Brenton 2017, 867)

While the mother is responsible for knowing what is good for her child (Marshall et al. 2014), she needs to rely on experts advice from the market and elsewhere to develop her own expertise (Hays 1996). However, her relationship to the market is quite complicated. While remaining bound to the market, she must make sure she does not use it to rationalize her own life at the child's expense (Hays 1996). A well-cited example is that using convenience foods conveys less effort and care (Warde 1999), although a more recent study shows how the mother can use the market to redefine convenience food as being consistent with care (Fuentes and Brembeck 2017). According to Carrigan and Szmigin (2006), embracing convenience consumption can make the mother more independent and thereby empower her to cope and to bring about change. Following McBride's (1990) ideas on empowering women, Carrigan and Szmigin (2006) argue that because convenience products give the mother more time, their use provides with instrumental independence by

helping her cope and take action to meet her needs. She also reaches emotional independence by defying the shame of using convenience products and defining herself in a good light rather than letting herself be judged by others.

In requiring the mother to navigate the two opposing, yet linked, ideals of vulnerability and taking responsibility, the ideology of intensive feeding also complicates the mother's relationship to her child. Indeed, on the one hand, the intensive feeding ideology frames the child as vulnerable and at risk, on the other hand, it emphasizes taking personal responsibility and teaching the child to become a responsible and healthy consumer. While navigating these two opposing ideals is not always easy for the mother, this study will show how doing so can nonetheless empower her.

THE PASSIVE CHILD IN INTENSIVE FEEDING

The influence of children in family decision making has been studied for decades (Gram 2015), with most of this work noting that children are increasingly influential (Belch, Krentler, and Willis-Flurry, 2005; Lawlor and Prothero, 2011; Wang, Holloway, Beatty, and Hill, 2007). However, although children are said to have replaced the adult male at the head of the table (Miller 1998), they remain objects to be acted upon within the context of intensive mothering and feeding (Brenton 2017; Hays 1996). Many of these influence studies have thus been criticized for failing to see the child in a wider context and for using an 'influence' conceptualization for the way mothers interact with their children within the family.

Kerrane, Hogg and Bettany (2012) encourage researchers to adopt a new view of the child in relation to the family that looks at family agency as distributed among its various members and working towards a collective goal. Indeed, some studies have focused on emotional and cooperative ways of negotiating food among mothers and children replacing competitive, "who wins" scenarios (Gram 2005). This is the position taken in this study. Rather than viewing children as an influence on mothers as they pursue individual goals, we take inspiration from Epp and Price (2008) in emphasizing collaborative, relational, co-created family activities and negotiations. Furthermore, in line with an upbringing focused on independence, these types of "negotiating families", in which parents listen to their children (Darian 1998) and children are able to take their parent's perspective (Kerrane et al. 2012), are said to characterize Western families (Du Bois-Reymond, Sunker, and Kruger 2001). As opposed to the negative emotions and feelings of guilt driving the ideology of intensive mothering, this type of cooperative context seems to encourage more positive emotions among those involved (Gram 2015). Thus, in considering the child as an active contributor in relation to intensive mothering, this study explores how mothers include their children as agents to negotiate ideals of intensive feeding in the context of the everyday dinner, and how this collaboration may empower them.

THE STUDY

The study is based on narratives of 19 middle class mothers on their everyday meal practices, derived from two focus groups (Moisander and Valtonen 2006) each with seven participants (Appendix A), as well as 13 long interviews (McCracken 1988), some of the

participants of which were also part of the focus groups (Appendix B). Informants came both from dual-income and single-parent households with children aged between 3 and 11. The majority were white and college educated and, as such, comprise the demographic most likely to engage in intensive mothering (Brown 2014).

We approached the focus groups as a site for cultural talk (Moisander and Valtonen 2006).Via the mothers' narratives, the focus groups were used to get access to the shared representations, activities and boundaries of intensive feeding and the place of children in relation to these. The long interviews, in turn, captured the mothers' more intimate experience of intensive feeding, and how they included their children.

In following Brenton's (2017) definition of intensive feeding, the analysis first examines the mothers' overall relation to ideals of intensive feeding. Subsequently we depart from this in exploring how mothers negotiated the ideals in collaboration with their children, and to what extent these collaborations empowered them. The two major themes derived from this analysis are: 'coping with intensive feeding in collaboration with the child', and 'challenging intensive feeding in collaboration with the child'.

INTENSIVE FEEDING, AN ALMOST IMPOSSIBLE EQUATION

Our findings demonstrate that the mothers had integrated many ideals of intensive feeding consistent with Brenton's (2007) definition of good mothering. This included the importance of a) spending time and effort at the various stages of meal production, b) developing knowledge of "healthy meals," often with help from experts, and c) educating their children to become responsible and healthy consumers. This also involved judging others as they judged themselves, commenting on mothers who they saw as opting for easy solutions that did not take into consideration the vulnerable child. Overall this required the mother to be on top of things, to be in control.

At the same time the mothers also acknowledged the complexity, and sometimes impossibility, of matching the high expectations associated with intensive mothering to their own reality. They spoke about the demands surrounding feeding as "too rigid," "constraining," and "stressful." These narratives indicate the doubts mothers expressed regarding their capacity to reach the standards of intensive mothering. However, as we show below, collaborating with their children helped the mothers cope with and challenge the ideals.

Coping with intensive feeding in collaboration with the child

Our findings show how collaborating with their children helped the mothers cope with intensive feeding. Coping means trying to reach the intensive feeding ideals and, at times, pushing against these ideals by delegating some of the control to the children and transforming them into co-creators. Most of the mothers encouraged their children to participate at the various stages of meal production. For example by inviting them on their shopping trips and asking them to choose among different alternatives "which fruit would you like?", providing them with alternatives for the menu "which kind of pasta do you want?", and by having them participate in the kitchen by cutting apples, customizing their own pizza or engaging them in fun activities at the dinner table, such as racing to finish the vegetable soup.

The mothers participating in this study involved their children as collaborative agents in choosing and preparing the family meal, positioning them as co-creators and thereby encouraging them to learn to make choices, express their own tastes, and develop their creativity. According to the mothers, such collaborations avoided the traditional fights at the dinner table when children refuse to eat. In-

deed, our findings suggest that when given more responsibilities in meal production, children were more involved at the dinner table and more willing to eat, which helped make mealtime more enjoyable for everyone. Making the mealtime more enjoyable was a way for the mothers to better cope with the demands of intensive parenting and to push against the view of the vulnerable child by instead encouraging him or her to be more active.

Giving more control to children has been understood by the intensive feeding framework as slack mothering (Brenton 2017). However, our findings show that mothers did it without feeling the guilt noted in previous work (Hays 1996). In redefining their children's participation from persons to be served to persons helping to serve, the mothers actively helped to educate the children and gave them more attention. Furthermore, as mothers loosened their control over meal production and transferred some of the responsibility of healthy eating to the children by involving them in the choices, they pushed against but did not negate the view of children as vulnerable. Instead, they took from this the need to educate them.

In sum, though coping meant the mothers tried to reach the intensive feeding ideals, they did so by inviting their children to collaborate in reaching these ideal. By giving their children more responsibility and themselves less control, they also experienced more pleasure and less guilt in their feeding responsibility. Indeed, not only did this collaboration give them instrumental empowerment via practical relief, it also gave them emotional empowerment to let go of control and redefine the situation as enjoyable rather than anxiety provoking.

Challenging intensive feeding in collaboration with the child

Our findings also show how mothers' collaborations with their children helped them to challenge and not obey the intensive feeding ideals. Indeed, their children's desires often fell outside the intensive feeding framework, like asking for strawberries when out of season, asking for junk food, or wanting to go to McDonalds. Our findings show that the mothers were able to welcome their children's desires and challenge the intensive feeding ideals. However they challenged theses ideals by transforming their activity into an opportunity to teach them about food and eating. By allowing them to try strawberries out of season, and find out that they are not very tasty, mix junk food with healthy food or to go to McDonalds once a month, the children would be able to develop their own knowledge and taste and manage consumption choices by themselves. Indeed, even if challenging some of the ideals, by emphasizing the educative dimension of the intensive feeding framework the mothers were able to legitimately welcome their children's desires and feel like good mothers. Moreover, the collaborative, educational co-construction of the meal departs from intensive feeding ideals that emphasize expert guidance over meeting children's desires.

Further, we noted some key tradeoffs as mothers welcomed their children's meal suggestions, such as buying lasagna or ordering pizza. Although these readymade foods tend to be seen as inconsistent with intensive feeding, they provided the mothers with more 'quality time' with their children. As Madeleine described this, "The time I spend cooking is time I am not spending with my daughter." Thus, through collaborations involving prepared foods and convenience items, the mothers redefined the intensive feeding framework further by making it less about intensive food work, and more about directing intensive attention to their children. Indeed, by complying with their children in the present, they educated them for the future.

In sum, challenging intensive mothering meant the mothers departed from and redefined the intensive feeding ideals by inviting

their children to collaborate. They did so by seeing these departures as opportunities to educate their children and spend more quality time with them. They favored what worked and brought harmony in their family over untenable experts guided ideals. Indeed, by refusing parts of the intensive feeding ideals, the children gave the mothers instrumental empowerment to challenge these same ideals. Seeking harmony, the mothers found emotional empowerment by redefining these refusals to learning opportunities and quality time.

DISCUSSION

The above findings have detailed how mothers collaborate with their children in the context of the everyday dinner in ways that enable them both to comply with and to challenge the ideals of intensive mothering. The findings demonstrate how collaborations can empower mothers to better negotiate the ideals of intensive mothering. Loosening the rules and making their children partly responsible for the meal empowers mothers by turning intensive feeding into an educational and enjoyable experience, rather than one of forcing their children into compliance or one in which they act as humble servants to their children. In redefining tasks and roles, the mothers empower themselves by partly liberating themselves from the kitchen, while guiding the children in making healthy choices for the future and forging valuable collaborative relationships with them.

Our research contributes to the literature in three ways. First, our study contributes to the intensive mothering literature by highlighting how mothers collaborate with their children and reposition them as active, co-constructing agents rather than passive recipients. This repositioning extends the previous literature emphasizing the child's increased influence in the family and over food consumption

(Cook 2004; Miller 1998), and acknowledging the vulnerable child (Hays 1996). Indeed, involving the child in the intensive food work creatively redefines and reenacts its ideals, thus alleviating the burden on mothers. By collaborating and thereby distributing agency, the mother pliably transforms the child's vulnerability into responsibility. As such, our work on the active nature of the mother-child relationship in intensive mothering complements existing work in which the child has been treated as a passive recipient.

Second, our findings complement previous literature outlining how the consumption of convenience products helps to empower mothers (Carrigan and Szmigin 2006; Fuentes and Brembeck 2017), by pointing to how this can also be accomplished with the help of their children. Indeed, while previous research highlights how the instrumentality and symbolism of consumer products can empower mothers, our research adds to this by showing that collaborating with children gives the mothers both instrumental empowerment via practical relief and emotional empowerment by helping mothers to distance themselves from pressuring ideals.

Finally, by demonstrating how women empower themselves through collaboration with their children and thus redefining feeding as a collective endeavor, we complement McBride (1990), who points to how female empowerment can be accomplished via independence from the help and judgment of others. In some ways similar to Lindridge et al.'s (2016) study on Nigerian women, our study shows how mothers empowered themselves in the context of family interactions, by collaborating in ways that blended their mothering tasks and consumption desires with the wishes and tastes of their children. In line with Christens' (2012) proposal for paying attention

Table 1: Illustrative Quotations

Theme	Subtheme	Illustrative Quotation
Intensive feeding, impossible equation	Impossible equation	I had a meeting with my son's school teacher, and she told me he must go to bed not later than 8 pm. I replied: "Well, that sounds great! But how am I supposed to do that when I pick my children at the daycare center at 6 pm, then we go back home, then homework, then shower, then prepare the dinner, and then be able to put everybody in bed by 8 pm? Alone on top of that … That's just… Impossible!" (Cristel, 2 children, single parent, Focus Group 2)
Complying with intensive feeding	Introducing choice	"Which pasta do you want? Do you want that one?" And suddenly, he gets to make a choice, they are responsible ... they become a little more autonomous in general by choosing the meal and suddenly he has more pleasure eating it since he chose it himself. (Bérangère, 2 children, married)
	Introducing choice	I offer them a palette of things to try, it's like a painter choosing the colors he wants to paint with… (Juliette, 2 children, married)
	Inviting the children to cook	And then they're [the children] so happy when they eat what they've made themselves, they're very proud! "I cut the apples to make the apple cake!" … (Laurence, 2 children, married) Oh yes… (Everyone, Focus Group 1)
Challenging Intensive feeding	Welcoming the children desires	They [the children] have their say, that's all. They're able to say to me, "I don't really like this" or "I prefer it like that." I often ask them, "What would you like?" or "What shall we have this evening?" That way, we decide together what we're going to eat. (Sofia, 2 children, married).
Challenging Intensive feeding	Welcoming the children's desires	McDonalds! They are super happy! For them, it's party time! The youngest, 3 years old, is the one who asks the most. I am not against. I am not for. But they all love it! (Chloé, 3 children, single parent)
	Legitimizing the children's desires	McDonalds, once month maximum! It's regulated. Yes, we've decided it all together […] They love the fries, they love the ritual, but … for example… they know they can't have soda […] Once we broke the rule, we went twice one month [to McDonalds], and they said, "Oh no no, this is horrible," but I told them, "Listen, you're fine, it's like everything in life, uh ... if we don't abuse bad things, it's okay." But they know very well that [McDonalds] isn't convincing from a nutritional stand point at all, they are all very aware of it. (Chloé, 3 children, single parent)
	Legitimizing simple cooking	Ok, I admit that I'm not a very good cook, it's not always super… But what counts is to develop their pleasure, to try new things, go to restaurants, travel, have the pleasure to pick strawberries in the fields in the summer. That's what counts! Not what I cook… (Eva, married, 3 children, Focus Group 1)

to "relational empowerment", we show how consumer empowerment can unfold and be facilitated through relationships.

The findings are limited to white middle class mothers. Future research should explore whether these findings apply to different genders and reverberate across broader cultures and across a broader range of socio-economic groups. Moreover, the study opens new paths for future research on collaboration and empowerment. By adding the children's perspective, future research could explore how they empower themselves in their collaboration with their parents. By exploring other contexts of collaboration within the scope of family, for example the use of technology, future research could further investigate how not only independence but also interrelationships enable consumer empowerment.

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APPENDIX A, FOCUS GROUPS
Table 2: Group 1, 7 mothers

First name	Number of children	Age of children	Professional activity	Nationality	Distribution of meal related tasks
Paloma	2	5 & 8	Beautician	Swiss	Shares responsibility for family meals with her husband
Christina	2	3 & 7	Administrative assistant	Swiss	Prepares and serves all family meals
Hanna	3	5, 9 & 12	Supervisor	Swedish	Shares responsibility for family meals with her husband
Agnès	2	7 & 10	Dietician	French	Prepares and serves the majority of family meals
Eva	3	1, 6 & 8	Job seeker	English	Prepares and serves the majority of family meals
Fanni	3	6, 9 & 11	Nursery teacher	Danish	Shares responsibility for family meals with her husband
Laurence	2	3 & 6	Job seeker	Swiss	Prepares and serves the majority of family meals

Table 3: Group 2, 8 mothers

First name	Number of children	Age of children	Professional activity	Nationality	Distribution of meal related tasks
Elena	2	2 & 4	Teacher	Swiss	Prepares and serves the majority of family meals
Sophie	2	8 & 12	Teacher	Swiss	Prepares and serves weekday meals
Monica	2	2 & 11	Florist	Swiss	Prepares and serves the majority of family meals.
Cristel	2	6 & 9	Childcare assistant	Swiss	Prepares and serves all family meals (single parent)
Françoise	1	11	Designer	Swiss	Shares responsibility for family meals with her husband
Anabelle	2	4 & 6	Architect	Swiss	Prepares and serves all family meals
Juliette	2	3 & 7	Administrative assistant	Swiss	Shares responsibility for family meals with her husband
Christiane	2	8 & 12	Nursery teacher	Swiss	Prepares and serves the majority of family meals

For reasons of confidentiality, the first names of the interviewees have been replaced by pseudonyms chosen by the researcher.

APPENDIX B, INTERVIEW INFORMANTS' CHARACTERISTICS
Table 4: Interview Informants' characteristics

First name	Family type	Number of children	Age of children	Professional activity	Nationality	Distribution of meal related tasks
Sabine	Married	3	3-3-7	Administrative secretary	French	Prepares and serves the majority of family meals
Madeleine	Single parent	1	9	Librarian	Swiss (French-speaking origin)	Prepares and serves all family meals
Veronica	Married	2	3-7	Art historian	Italian, born in Switzerland	Prepares and serves the majority of family meals
Sandrine	Couple together	2	5-10	Make-up artist	Swiss (French-speaking origin)	Prepares and serves the majority of family meals
Sofia	Married	2	8-11	Teaching assistant	Italian	Shares responsibility with her husband
Tatiana	Married	1	8	Actor	Swiss (French-speaking origin)	Prepares and serves the meals for her daughter.
Bérangère	Married	2	2-4	Social assistant	French	Prepares and serves all family meals
Chloé	Single parent	3	3-7-10	Secondary school teacher	Swiss (French-speaking origin)	Prepares and serves all family meals
Juliette	Married	2	4-8	Administrative assistant	Swiss (French-speaking origin)	Shares responsibility with her husband
Cristel	Single parent	2	7-10	Childcare assistant	Swiss (French-speaking origin)	Prepares and serves all family meals
Elena	Married	2	3-5	Secondary school teacher	Swiss (French-speaking origin)	Prepares and serves the majority of family meals. Her husband participates.
Annabelle	Married	2	5-7	Architect	Swiss (French-speaking origin)	Prepares and serves all family meals
Sophie	Married	2	9-13	Primary School teacher	Swiss (French-speaking origin)	Prepares and serves weekday meals

Neither Wasted nor Wanted: Theorising the Failure to Dispossess Objects of Ambiguous Value

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INTRODUCTION

Consumer research has traditionally presented the consumption process in three stages – acquisition, consumption and disposition (de Coverly et al. 2008; Jacoby, Berning, and Dietvorst 1977) and it is assumed that consumers will naturally move through the process (Cross, Leizerovici, and Pirouz 2017). Whereas commodity acquisition and utilisation have been researched extensively, disposition has received scant attention – a curiosity given its ubiquity and significance in consumer's lives (Arnould and Thompson 2005). Disposition is a significant issue. Whether it is a painful process, during which individuals endure an experience akin to the death of some piece of themselves or the joyful shedding of objects imbued with an unwanted self, disposition is an integral part of modern life (Lastovicka and Fernandez 2005; Price et al 2000). There are exceptions to this process, for example, hoarders, collectors and particularly frugal consumers retain commodities beyond their expected life cycle (Belk, Wallendorf, and Sherry 1989; Coulter and Ligas 2003; Haws et al. 2012; Lastovicka et al. 1999). Indeed, there are certain categories of goods which are retained indefinitely either due to their emotional or financial value (Belk et al. 1989; Jacoby et al. 1977). Epp and Price (2010) ask why some valued items are banished to storage while others remain in active use. Items which are no longer useful may also be kept, living indefinitely in nooks and crannies around the home. These items are particularly interesting for consumer researchers because their retention in consumer homes reveal that assumptions regarding disposition processes need to be re-examined. As such, this paper asks what happens to things when they are neither wasted nor wanted, when the little meaning they initially held was tied to another, more valuable object or when they have been replaced.

This paper stems from a larger project exploring technological waste disposition. Analysis revealed a kind of object which is retained indefinitely, which does not hold special meaning, is not particularly valuable or personal. These objects are of ambiguous value to the owner (including obsolete cell phones, laptops, unused cables, lockless keys, long paid bills) – objects that seem to hover between being wanted and wasted - they hold the ghost of meaning or the possibility of (re)use.

DIVESTMENT IN THE LITERATURE

Divestment serves as our point of departure, drawing on the current understanding of how a commodity's meaning, and thus value, typically defines its terms of possession and eventual disposal (Lastovicka and Fernandez 2005; Price et al. 2000). Disposition literature can be broadly divided along three fault lines: the disposition process (Lastovicka and Fernandez 2005; McCracken 1986; Young 1991), meanings and self-reference (Belk 1988; Richins 1994) and buyer-seller relationships (McCracken 1987; Price et al. 2000).

Jacoby, Berning and Dietvorst (1977) described three kinds of disposition behaviour, keeping the product, permanently disposing of the product or temporarily disposing of the product. Subsequent research revealed disposition as an ongoing process (rather than a discrete event), composed of emotional and physical detachment (Cherrier 2009; Young and Wallendorf 1989). The process of disposition entails several stages – distancing (the object is moved to the homes extremities), critical events (major life events) and value assessments (where the financial, utilitarian, symbolic value of an object is assessed) (Hirschman, Ruvio, and Belk 2012; Roster 2001). This is particularly pertinent when individuals are facing a "role transition" or a change in their life when objects with particularly significant symbolic meaning are discarded (Young 1991).

Meaning is the source of an object's value, both that ascribed by the owner (private meaning) and that which is ascribed by society (public meaning) (Grayson and Shulman 2000; Richins 1994). Disposition research tends to focus on positively valanced objects, "special" or "favourite" things (Price et al. 2000; Roster 2014; Schultz, Klein, and Kernan 1989). However, there are exceptions, Lastovicka and Fernandez (2005) address items which are negatively valenced. How an individual experiences detachment from an object is determined by that object's associated meaning (Lastovicka and Fernandez 2005; Young and Wallendorf 1989). It is long established that objects hold both functional and symbolic meaning, symbolically things maintain a connection between possessions and their possessor's history, values, and relationships (Belk 1988).

Divestment rituals manage these meanings (McCracken 1986; Rook 1985) allowing individuals to part with their possessions. A number of rituals have since been uncovered; the transference a vessel's private meaning's essence to an icon eases the vessel's divestment as consumers can retain part of the positively charged meaning held in the vessel, reducing the need for emotional detachment. Alternatively, an item can be moved item to a "transition place" thus eroding private meaning associated with the item and preventing contagion. Cleaning and organising items before they are divested serves two functions - removing the private meanings which became attached through personalisation (Belk, 1989) and reassembling the public meaning of new store-bought commodities by mimicking the condition in which the item was bought (Lastovicka and Fernandez 2005; Price et al. 2000).

The final ritual described by Lastovicka and Fernandez (2005) is the rendering of private meanings public - this occurred where the other rituals had failed or had not been attempted, here the sellers explained the importance of the item to a potential buyer. Positively charged or sacred artefacts may never be sold (Belk 1989; Belk, Sherry, Jr., and Wallendorf 2002), however, where necessary older consumers tend to seek heirs/buyers with whom they then share the history of various artefacts to create a legacy (Price et al. 2000). Disposing consumers seek buyers with common identities, a shared sense of self, to ensure that conveyed meaning is fully understood and appreciated by the potential buyer (Lastovicka and Fernandez 2005).

According to Belk (1988) objects to which individuals are no longer attached, things which no longer represent their desired selves, represent their undesired selves and those things which have fallen into disuse typically face disposal. Exceptions to this rule include hoarders and "packrats" (Coulter and Ligas 2003; Orr, Preston-Shoot, and Braye 2017) however, the tendency or hoard may also be associated with the nature of the object, evidence suggests that certain disused or obsolete objects tend to be stored (Saphores et al. 2009) but good estimates of the volume of e-waste stored by US households are still unavailable. In this context, we make two contributions

based on a national random survey of 2136 US households. First, we explain how much e-waste is stored by US households using count models. Significant explanatory variables include age, marital and employment status, ethnicity, household size, previous e-waste recycling behavior, and to some extent education, home ownership, and understanding the consequences of recycling, but neither income nor knowledge of e-waste recycling laws. Second, we estimate that on average, each US household has 4.1 small (???10 pounds.

METHOD

This research explored the disposition processes of obsolete and/or broken electrical and electronic items. Drawing on twenty-six in-depth interviews with thirty participants aged between 19 and 60, in which each one was asked a series of questions concerning their relationship to electronics, experiences with technological waste and dispositional routines. Typically the participants were known to the interviewer ensuring an open discussion of their possessions and related meanings (Hirschman et al. 2012). To move beyond richly textured descriptions, the majority of interviews involved walking with participants around their homes, including visits to their garages and attics and other spaces in which unused technological items were located. This modification on the walking interview (Hein, Evans, and Jones 2008) was ideal as it exposed parts of the home generally not considered by consumer researchers and offered researchers further opportunity to query the participants "collections". In so doing an array of objects were revealed which seemed to be connected only by their place of rest. Indeed, it seems goods of ambiguous value are stored throughout the home including in drawers, boxes, bags and on shelves.

The interviews were intended to address certain broad topics and were largely unstructured. Interviews were recorded and transcribed, they lasted between 30 and 120 minutes. The transcriptions, supplemented with field notes and photographs comprise the data drawn on for this research. Researchers conducted thematic analysis generating "thick description" (Geertz 1973) and "thick interpretation" (Denzin 2001). Given the paucity of research concerning e-waste disposition this kind of exploratory research was deemed most appropriate (Deshpande 1983; Guba and Lincoln 1994). Emergent interpretations were triangulated across researchers (Miles and Huberman 1994) and interrogated in light of extant literature. This method illuminated the subjective (emic) consumer experience of waste disposition (or retention) and the cultural (etic) meaning of that experience. This process elucidated three prominent cultural values as discussed below.

FINDINGS AND DISCUSSION

The first being that the objects in question, despite being obsolete or broken are *clean* and therefore do not offend order– this is captured by the cultural value of *cleanliness*. Second, participants will keep things which may be useful in the future, this is a form of waste aversion described by Lastovicka et al., (1999) as *frugality*. Finally, individuals retained items which may be useful to members of their social network, this we termed *altruism*. Cleanliness, frugality and altruism are, what Nicosia and Mayer (1976) describe as cultural values - "(a) they are widely held beliefs, (b) they affirm what is desirable, and (c) they have some impact on activities" (p. 67).

Cleanliness is determined by existent cultural values, blueprints which govern appropriate behaviour (McCracken 1986; Nicosia and Mayer 1976). Participants reported storing significant quantities of clean but broken or obsolete "stuff", Lexi's (F26) parents ignore her urgings to divest old electronics:

Lexi: Five boxes filled with this stuff…Then I put them all outside of their door. So, they literally had to fall over it in the morning to get away from this thing so that they wouldn't avoid it and pretend that it doesn't exist. They just moved it out of the way, and now they continue to walk past it. This was four years ago. They still don't acknowledge the boxes of stuff. I have been like, look through it, tell me what you want, throw it out. They just walk past it. They don't acknowledge it.

These boxes of "stuff" can simply be pushed aside, they are not perceived as *dirty,* they are not "clearly out of place" and therefore they no not offend order (Dion, Sabri, and Guillard 2014, 584). "Dirt is essentially disorder. There is no such thing as absolute dirt: it exists in the eye of the beholder… Eliminating it is not a negative movement, but a positive effort to organise the environment" (Douglas 1966, 2). The contents of these boxes are of ambiguous value, they linger in the margins of our homes, although no longer actively wanted they are not imbued with the definitive property of "waste", they are *clean.*

"Dirt is the by-product of a systematic ordering and classification of matter, in so far as, ordering involves rejecting inappropriate elements" (Douglas 1966, 36). Martin clearly expresses the idea that his family's "technological garbage" is not a contaminant, rather it is clean:

Martin: I feel that there is a lot of technological, like, garbage in our house now. There are also a lot of chords, like flying around, it's not like they are lying around everywhere or it's messy, it's all in, like, a place.

The European understanding of defilement pertains to hygiene and aesthetics, pathogens and disease. Contaminants or contagions are *naturally* defined by their visible state of cleanliness, thus items such as these unused electronics, things which will not decompose, will not offend the symbolic order, and thus they can be retained (McCracken 1984). Product retention is "a consumer lifestyle trait that reflects an individual's general propensity to retain consumption-related possessions" (Haws et al. 2012, 225). Here, we argue that consumer will retain products despite no longer wanting them if they do not offend order.

The second theme, *frugality* is a dominant theme across the data:

Mae: I was just absorbing electronic devices until I could no longer keep them. And then when I moved…We just hoard things, that's what we do. Like, once we have something, we don't like to get rid of it, because we are never going to get it again…But, yeah, disposing of electronics comes pretty hard for me. Like, even if something doesn't work quite right like, I don't want to get rid of it.

For some, Mae included, actually owning (almost) functioning electronics offers some comfort, she views any sort of disposition as a lost opportunity, it is disappointing and ominous, in the past, she has sold electronic items in times of need. Mae's discomfort in divestment is embedded in frugality – defined as restraint "in acquiring and in resourcefully using economic goods and services to achieve longer-term goals" (Lastovicka et al. 1999, 88)offspring number, size and energetic investment,\\nlarval planktonic period, morphology and survivorship. This paper\\nreviews a decade of research into the control and consequences of the\\ntraits associated with planktotrophy and lecithotrophy in S. benedicti.\\nThe dominant control on

reproductive and developmental characters is\\ngenetic. Significant additive genetic variance has been detected for egg\\ndiameter, fecundity, larval planktonic period and aspects of larval\\nmorphology. However, environmental factors such as temperature, food\\nquality and photoperiod, and intrinsic factors such as maternal age,\\nexert considerable influence on non-trophic developmental traits (e.g.,\\ noffspring number, size and energy content. People in this situation may be less likely to divest unless under real pressure to do so or the items resurrection is impossible (Saunders 2010). Other participants described the joy in fixing old objects, in problem-solving using the "tools" in their collection. Haws *et al.,* (2012) link creativity and frugality arguing that frugal consumers tend towards creative reuse of their stuff and, where possible, it is this creative frugality which will prompt individuals to distribute their unwanted electronics amongst their social network to ensure their continued use (Coulter and Ligas 2003; Price et al. 2000).

Reuben embodies the third cultural value underlying the retention of objects of ambiguous value; *altruism* is key to social integration, it is considered to be the foundation of human friendship and is at the heart of kinship (Brañas-Garza et al. 2010; Curry, Roberts, and Dunbar 2013).

Reuben: The [bits of an old PC] are currently stored in a box to go to my brother-in-law, who really wants to get into playing PC games and does, he is after going back to College as well, and works in [name of fast food store], and doesn't have the money to do it. So, I am waiting to get one or two final pieces and then give him the machine. If he will get the use out of it, rather than it going to a landfill or trying to make sure that it gets recycled properly like, it's way better.

Kin altruism features heavily in this research, electronic items move readily through family networks (sharing in). However, items do move to acquaintances and, even, strangers (sharing out) (Belk 2010). This practice is unproblematic unless these items are stored indefinitely for the potential use of another. Product retention has been researched in the context of "packrats" and hoarders, individuals who keep things beyond their functional or symbolic use (Coulter and Ligas 2003; Guillard and Pinson 2017).

CONCLUSION

This research explicates the cultural context in which consumers store objects of ambiguous value, indefinitely. Importantly, this kind of product retention is not limited to "packrats" or hoarders (Coulter and Ligas 2003; Guillard and Pinson 2017), rather, it is commonplace amongst typical consumers. In conceptualising the cultural blueprints for product retention we contribute to the divestment literature, adding a category of product which is "hoarded" by typical consumers and we aim to influence policymaking in this area. As technology progresses the volume of obsolete products is quickly increasing, as are the items which will fall into this invisible category. Thus, it is argued that, in this time of resource depletion, hyperconsumption and growing environmental concern these hoarded technological products are a vast and untapped resource. There is an urgent need to bring these items back to the market. Indeed emergent economic models such as the Sharing Economy and the Circular Economy rely on consumers sharing, gifting or recycling of their unwanted resources (Ellen MacArthur Foundation 2013; Scaraboto 2015).

Etic Theme	The cultural context in which objects of ambiguous value are retained indefinitely: Cleanliness, Frugality and Altruism.		
	Quotation 1	Quotation 2	Quotation 3
Cleanliness: This theme was developed via thematic analysis – participants described their technological waste in terms of "junk" or "defunct" but did not consider their collection to be a contaminant.	Grainne: Yeah. Like that is a Bluetooth thing I got off a boyfriend once, that you stick up in the car. It didn't really ever work very well. Now some of these things aren't mine, they are just left here. I think that is some kind of internet connection. This is an old camera. That's just general, kind of, junk. [Broken] headphones, yeah, I just leave them in here.	Steve: There was a lot of crap in my room and things all tangled up. And I would have kept lots of things and but once you realise that they are completely defunct! And I checked the phones and these are all dead. I would have gave to Jack and Jill also.	Martin: Three weeks ago, I saw a pair of headphones on the floor that were broken, and I took it, and I threw it in the bin. Save the Planet...It's better than when it's rotting somewhere in nature like. I think there is still a difference between throwing something away and burning it, that's not environmentally friendly, but there is still a difference to just throwing it out into the woods like. It's just unnecessary. I don't know
The perceived cleanliness of technological and electronic waste means that it can be stored in the home for extended periods. Steve, Grainne and Rory all expressed having stored defunct or obsolete items in their homes.			
Frugality presents as waste aversion. Frugal consumers are creative. Marjie describes her husbands endeavours to reuse broken items in an effort to avoid waste.	Marjie: He would keep toasters and kettles. He would keep everything; do you know what I mean. A lot of the electric stuff, he hates, old electrical stuff he hates to part with, because it could be used for something. It will make something else. It will be adapted to do something else. Nuts, I know, but he does.	Lexi: That is the thing because you are going to wander around now and if you throw one of those things out. You are going to wander around, two weeks down the line, and you are going to find the cable that belongs to that. You will be like, nooooooo, it is that cable that I threw out. You are just going to kick yourself for a month.	Deirdre: My second [laptop] was intermitted working so I kind of thought maybe that is fixable because that was one I had bought a couple of years ago, but I didn't actively need it because I was able to do everything that I needed through the laptop that I have for work. So it still works.
Consumers retain defunct objects as a consequence of perceived frugality.			
Altruism: Participants often described sharing their unwanted products either with family and friends or with strangers. This is linked to frugality in that many participants articulated a desire that their products continue being used.	James: My memories might be a little bit blurred because I seem to remember giving at least one TV to a family that Catherine is friendly with. Okay. They are just a really nice family. The Dad is like a Pastor in the African Church in Cobh	Pete: I had a yoghurt maker of all things. Yeah. Yeah. I think I had an old VHS cassette recorder, a few bits like that. What I did is, in the UK we have this Network called "Freecycle" or "Freegal". They are community-based boards whereby you can say that you are giving you've got these items here to give away for free, and interested parties might want to say, "okay, I will message you to arrange an appointment", we will meet up and then they will just take away the items	Grainne: The previous one, I gave to my friend's husband, because he wanted a phone, so I said he could have my old phone because I was getting a new one. So, I just cleaned it out and I just gave it to him.
Where frugality and altruism meet consumers tend to share these possessions with family members, friends and strangers.			

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The Minimal Interactivity Effect: The Role of Thought Speed in the Evaluation and Consumption

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INTRODUCTION

Changes in technology have dramatically affected how consumers interact with media consumption. One of such influence is the shift from traditional to digital media — digital consumption increased by 65%, while traditional media consumption decreased by 18.5% over a seven-year period (Statistica, 2017).Yet, little is known about what drives consumers to evaluate a digital experience as more engaging and why. To contribute to this puzzle, this research demonstrates the power of *minimal interactivity* on consumers' consumption of a digital experience. We find that even a simple click to continue can increase consumption by 45% in a consequential choice task. While prior research in flow (Csikszentmihalyi 2008; Novak, Hoffman and Duhachek 2003), engagement (Higgins 2006) and emotion responses (Peace, Miles and Johnston 2006) offer explanations to why interactivity might enhance a digital experience in complex situations, these accounts are not sufficient to explain what happens when interactivity is at its minimal level, such as a single click to advance. To explain this effect, we introduce the concept of thought speed into the literature. Thought speed is defined as the total thoughts occurring per unit of time (Pronin and Jacobs 2008). Prior work suggest that simply considering engaging in action induces mental representations of the behavior (Schack and Tenenbaum 2004a, 2004b), which consequently increases thought speed (Yang and Pronin 2017). As such, ceteris paribus, additional thought is required when a consumer exercises control over a consumption experience versus passively consuming the same experience. Further, prior work indicate that consumers prefer productive hedonic experiences, i.e. experience in which they do more within a given period (Murray and Bellman 2011). Thus, greater thought speed means more mental activity per unit of time and should elevate evaluations of the experience. In a series of four studies, we test this model that links interactivity to the evaluation and consumption of hedonic experiences via changes in thought speed. This work contributes to the literature by offering an additional explanation to why interactive experiences are evaluated as more engaging. Finally, our results have important implications for understanding consumer response to interactive media versus more traditional passive media consumption.

BACKGROUND AND THEORY DEVELOPMENT

We argue that the difference between active and passive consumption can be established through minimal interventions and design (Nicholas and Rowlands 2008, 203). While operationalization of interactivity varies in complexity, we take a conservative approach and examine the effect of *minimal interactivity* by testing the impact that clicking to navigate from one image or headline to the next has on evaluation and consumption.

To understand this effect, we turn to recent work on thought speed. Formally, thought speed is defined as the total thoughts occurring per unit of time (Pronin and Jacobs 2008). Prior work suggest that simply considering engaging in action induces mental representations of the behavior, which consequently increases thought speed (Dijksterhuis and Bargh 2001; Yang and Pronin 2017). In this research, we have defined minimal interactivity as exercising active control during a consumption experience. As such, all else being equal, additional thought is required when a consumer exercises control over a consumption experience versus passively consuming the same experience. Further, prior work indicate that consumers prefer

productive hedonic experiences (Murray and Bellman 2011). That is, experience in which they do more within a given period. Thus, greater thought speed means more mental activity per unit of time and should elevate evaluations of the experience. In other words, we predict that when thought speed increases, consumers will evaluate the experience more positively, which ultimately increases consumption.

STUDY SUMMARY

Four studies test these predictions. First, we examine whether minimal interactivity influences thought speed and experience evaluation. In studies 1A and 1B, participants were asked to either click on a button to proceed, or were exposed to the same content before it auto-advanced to the next image (study 1a) or news headline (study 1b). We then asked participants to evaluate the experience and report their thought speed. As predicted, those in the interactive conditions evaluated the experience more positively than those in the passive conditions (Study 1A: M's = 2.85 vs. 2.61; $F(1, 189) = 4.81$, $p = .029$; Study 1B: M's = 4.26 vs. 3.77, $p = .028$). We also find evidence for accelerated thought speed as the underlying mechanism via mediation analyses (Indirect effect_Study1A: $\beta = .07$, SE = .034; CI = .008, .14; Indirect effect_Study1B: $\beta = .28$, SE = .12; CI = .071, .55) and rule out alternative mechanisms (engagement, affect, and flow).

In Study 2, we examined the underlying process by testing multi-tasking as a moderator and provide the first evidence for minimal interactivity influencing consumption. Because thought speed is a function of numbers of thoughts occurring per a given unit of time, it should accelerate when people are concurrently thinking about two things (Block, Hancock and Zakay 2010). However, thought acceleration is likely bounded by consumers' available cognitive resources (Kahneman 1973; Wickens 1980), which suggests a ceiling effect after cognitive resources are fully allocated. To test this, we operationalized multitasking with a cognitive load manipulation. As predicted, cognitive load accelerated thought speed among those in the passive (M's = 3.88 vs. 2.74, $F(1, 121) = 7.35$, $p = .008$), but not interactive condition (M's = 4.41 vs. 4.31, $F(1, 121) = .059$, $p = .81$). Importantly, having control over the content increased participants' intention to consume more (M's= 3.71 vs. 4.52, $F(1, 121) = 5.63$, $p = .019$).

In Study 3, we find further support for the proposed model and rule out alternative explanations by 1) asking participants to estimate the experience duration, and 2) contrasting minimal interactivity with simple motor actions. To do so, we added an active condition in which participants were instructed to view the images and to also click on a button (unrelated to content progression) at the bottom of the page. Consistent with our predictions, participants in the interactive condition ($M = 5.76$) were more likely to consume the experience as compared to the active ($M = 5.10$, $p = .005$) and the passive conditions ($M = 5.19$, $p = .012$). Additionally, estimation of the consumption duration is not a significant mediator ($\beta = -.025$, SE = .021; 95% CI = -.072,.0099).

Study 4 replicates the pattern of results in prior studies using a consequential consumer choice task in two stages (Stage-1: Interactive vs. Passive; Stage-2: Interactive vs. Passive). In stage-1, all participants saw a series of twenty images. In stage-2, all participants were asked to view as many images as they liked and that they could choose to quit viewing at any time. We found a main effect of interactivity in

stage-1 on the number of images consumed at stage-2 (Wald(1, 386) = 4.56, p = .033). Specifically, those in the interactive condition consumed significantly more than those in the passive condition when given a chance to consume freely in stage-2 (M's = 13.28 vs. 10.69). Pairwise comparisons revealed that the total images consumed are not significantly different from each other as long as participants were in the interactive condition in at least one of the two stages.

GENERAL DISCUSSION

Researchers have grown increasingly interested in better understanding the consumption of hedonic digital experiences. Prior work has examined interactivity in the context of information processing and found a positive effect on product evaluation (e.g., Ariely 2000; Lombard and Snyder-Duch 2001; Schlosser 2003). Complementing this work, we investigate the effect of minimal interaction on consumer evaluations and, ultimately, their consumption of digital experiences. Across a series of 5 studies in two different hedonic consumption domains, we demonstrate a robust effect of interactivity on consumer behavior and explain the underlying psychological mechanism. In studies 1A and 1B, we show that, in both image viewing and reading, consumers evaluated a digital experience more positively when they interacted with the content rather than passively consuming it. Those initial studies also provided supporting evidence for our prediction that thought acceleration mediated this effect, while at the same time ruling out alternative explanations.

We find that multitasking plays an important moderating role, which can cause thought acceleration during passive consumption (study 2). In addition, the minimal interactivity effect cannot be attributed to simple motor actions nor an estimation bias (study 3). Finally, we demonstrate that this minimal interaction effect extends beyond evaluation to consumption through a serial mediation process (studies 2, 3 and 4).

This research makes several theoretical contributions, beginning with a demonstration of the powerful influence that even minimal levels of interactivity can have on consumer behavior. Initial

research in this area tended to focus on the role of interactivity on information processing, where tasks often involve challenges and skills (Mathwick and Rigdon 2004). For example, how perception of interactivity influences perceived website usefulness (Wu 2005) and product evaluations (Schlosser 2003). This is consistent with the initial use of the internet as a vast source of information. However, with the growth of social media and the ubiquity mobile devices, digital hedonic experiences have become an essential part of the everyday consumer experience (Statista 2018). Our findings speak to how even minimal interactivity can have substantial effects on consumption decisions. In doing so, we provide evidence for a positive effect of interactivity that is defined by the active control that participants have over the digital experience.

In addition, we introduce a new psychological mechanism to the marketing literature. Specifically, thinking about taking action accelerates thought speed, which then elevates evaluations and drives consumption. In contrast to flow, which tends to require a balance between skill and challenge (Csikszentmihalyi 2008), our thought speed account helps explain preference for behaviors that require minimal skill and challenge.

This research also contributes to the emerging literature on the effects of variations in thought speed (Chandler and Pronin 2012; Pronin and Jacobs 2008). Prior research has identified various methods of manipulating thought speed, for example, varying music tempo (Trochidis and Bigand 2013), presenting paced reading stimuli (Chandler and Pronin 2012), and counting at different pace (Pronin and Jacobs 2008). We contribute to this extant literature by demonstrating two new determinants of thoughts speed: (1) interactivity; and (2) multitasking.

From a practical perspective, our findings suggest that an important difference between passively received traditional media and the recent rise of interactive media is that interactivity leads to more positive evaluations and increases future consumption of that experience. In addition, our results suggest that encouraging multitasking during passive consumption can enhance a hedonic experience.

Table1

Study	Context	Participants	Key variables	Results			
1A	Image	191 undergrads	*IV:* Interactivity		Passive		Interactive
		Mage = 20.07	*Mediator:* Thought Speed	Thought Speed	5.17 (1.77)		5.79 (1.94)
		59.7% female	*DV*: Evaluation	Evaluation	2.61 (.74)		2.85 (.79)
1B	Reading	189 Mturker	*IV:* Interactivity		Passive Slow	Interactive	Passive Fast
		Mage = 35.6	*Mediator:* Thought Speed	Thought Speed	4.50 (1.66)	4.65(1.39)	3.90(1.61)
		50.8% female	*DV:* Evaluation	Evaluation	3.87(1.32)	4.29(1.22)	3.77(1.37)
2	Image	125 undergrads	*IV:* Interactivity		Passive		Interactive	
		Mage = 21.16	*Moderator:* Cognitive Load		No Load	Load	No Load	Load
		53.6% female	*Mediator:* Thought Speed	Thought Speed	2.74(.32)	3.89(.28)	4.41(.31)	4.31(.31)
			DV1: Evaluation	Evaluation	2.89(1.15)	3.14(1.13)	3.40(1.13)	3.67(1.20)
			DV2: Consumption Intention	Consumption	3.48(1.83)	3.94(2.04)	4.38(1.99)	4.66(1.63)
3	Image	284 MTurkers	*IV:* Interactivity		Passive	Active	Interactive
		Mage =33.15	*Mediator:* Thought Speed	Thought Speed	3.63 (1.38)	4.00 (1.44)	4.44 (1.45)
		54.57% female	*DV1:* Evaluation	Evaluation	3.64(1.20)	3.86(1.03)	4.09(1.19)
			DV2: Consumption Intention	Consumption	5.19(1.67)	5.08(1.75)	5.76(1.32)
4	Image	390 Mturkers	*IV:* Interactivity at S1, S2		Passive		Interactive	
		Mage = 39.29	*DV:* Actual Consumption		Interactive	Passive	Passive	Interactive
				Consumption	12.22 (10.38)	9.19(9.24)	13.18(10.60)	13.37(10.10)

* p <.05** p <.01

*** p <.001

Finally, this research may help explain the increasing trend of spending large amounts of time interacting with digital platforms and TV-connected devices (e.g. Apple TV, Smart TV apps, etc.). According to a recent report (Nielsen 2018), daily time spent on interacting with these devices increased by a minimum of five and a maximum of forty minutes from fourth-quarter, 2017 to first-quarter 2018. Furthermore, digital consumption increased by 65% (from 214 minutes in 2011), while traditional media consumption decreased by 18.5% (from 453 minutes in 2011)over a seven-year period (Statistica, 2017).

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Using Virtual Reality to Increase Advice Compliance: The Role of Enhanced Engagement

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INTRODUCTION

Advice is a ubiquitous part of the consumption experience and it can help consumers navigate marketplace decisions and improve decision accuracy (Larrick & Soll, 2006; Schwartz, Luce, & Ariely, 2011) Yet, competent counsel can be difficult to obtain, and too often does not have the desired impact because of failures in compliance (Harvey & Fischer, 1997). In this research, we examine one possible solution to this issue and demonstrate that giving advice via virtual reality (VR) enhances engagement, and positively influences compliance.

Despite the benefits of adhering to advice, noncompliance remains a critical problem (Bonaccio & Dalal, 2006). Patients, for example, often fail to comply with medical guidance (Iuga & McGuire, 2014; Osterberg & Blaschke, 2005). Similarly, financial advice—such as creating a budget to track income and expenses—often goes unheeded (Calcagno & Monticone, 2015). Although some types of noncompliance may result in only minor deviations from the desired outcome, failing to follow the advice of a doctor or an investment advisor can have serious consequences for an individual's health or financial security.

In this research we propose and demonstrate that advice given through virtual reality (VR) can enhance engagement, which acts as a potent driver of advice compliance.

THEORY DEVELOPMENT

Although earlier research on VR defined it as a piece of technological hardware (Ellis, 1994), research also suggests a shift towards the human experience involved during the process (Steer, 1995). As such, we define and examine VR as the participants' experience of immersion and perception of interactivity. Specifically, users are able to directly control their field of vision and what they focus on, making the experience more interactive. Building on this definition, we suggest that because VR is immersive and interactive, it can be an effective way for advisors to improve advisee engagement. Prior research examining online consumer experience suggests that interactivity is a precursor of engagement (Mollen & Wilson, 2010). Further, empirical work in the consumer domain supports this theorizing and finds that increasing interactivity positively affects evaluations (Schlosser, 2003; Sicilia, Ruiz, & Munuera, 2005). Finally, engagement is a strong driver for facilitating and fostering emotional bonds between customers and firms (Gill, Sridhar, & Grewal, 2017). There is a greater likelihood that engaged customers will have a more intense brand experience (Phillips & McQuarrie, 2010), form a more favorable attitude towards the target, and adopt new products more rapidly (Thompson & Sinha, 2008). Taken together, we examine the impact of VR on individuals' likelihood to comply with medical and financial advice—that is, their intention to follow advice and change their behavior. In particular, we propose that the positive effect of VR on advice compliance is driven by enhanced engagement with the experience. We test our theory in a pilot study and two experiments using custom-built VR advice-taking environments. The results support for our predictions.

PILOT STUDY

In the pilot study, we used a scenario-based design to examine the perception of and preference for receiving advice via VR.

Procedures

A total of 402 participants were recruited for the experiment from Amazon Mechanical Turk in return for $.50 USD. Participants were randomly assigned to read through one of two scenarios—receiving dental health vs. financial advice. After reading the scenario, participants were asked to choose between receiving advice through a 2D video or a VR video. To ensure participants perceived no difference in the actual content between the 2D and the VR video, we explicitly told participants that the video content was identical. We asked all participants to indicate their willingness to receive advice through the two media, their expectations regarding how engaging the experience would be, and their likelihood of compliance with advice given in each media. Finally, we asked participants to indicate whether they would want to receive training prior to receiving advice through the two media.

Results

In the personal finance condition, participants evaluated the VR option as more engaging (M_{VR} vs. M_{video} = 5.76 vs. 4.33, SD = 1.44 vs. 1.57), $t(199)$ = -13.09, p <.001) and interactive (M_{VR} vs. M_{video} = 5.71 vs. 3.99, SD = 1.51 vs. 1.72), $t(199)$ = -10.75, p <.001) than the 2D video option. We also found similar results in the dental health condition—participants evaluated the VR option as more engaging (M_{VR} vs. M_{video} = 6.01 vs. 4.65, SD = 1.30 vs. 1.45), $t(198)$ = -15.9, p <.001) and interactive (M_{VR} vs. M_{video} = 5.96 vs. 4.15, SD = 1.37 vs. 1.85), $t(198)$ = -15.5, p <.001) than the 2D video option. Despite displaying a higher tendency to seek advice in 2D condition than in VR, participants reported an elevated intention to comply with advice (M_{VR} vs. M_{video} = 5.33 vs. 5.12, SD = 1.47 vs. 1.48), $t(199)$ = -2.74, p <.01) and to change behavior (M_{VR} vs. M_{video} = 5.01 vs. 4.72, SD = 1.62 vs. 1.57), $t(199)$ = -3.70, p <.001) when the advice is given through VR versus 2D video in the personal finance condition. Results from the dental health condition were consistent, participants reported higher intention to comply with advice (M_{VR} vs. M_{video} = 5.52 vs. 5.29, SD = 1.31 vs. 1.35), $t(198)$ = -2.45, p <.05) and to change behavior (M_{VR} vs. M_{video} = 5.09 vs. 4.78, SD = 1.35 vs. 1.40), $t(198)$ = -3.43, p <.01) when the advice is given through VR versus 2D video. The pilot study provides initial evidence that people are more comfortable with 2D video and more likely to seek out advice in that format. Given the novelty of VR, this make sense. People are more comfortable using technology with which they have more experience (Murray & Haubl 2007); however, they see the advantage of VR—that it is likely to be more engaging—and they anticipate that it will affect their compliance behavior.

EXPERIMENT 1

In Experiment 1, we purpose-built and programmed a virtual environment that simulated a financial advisor's office.

Procedure

One-hundred-and-ninety-one undergraduate students (60.7% females; M_{age} = 20.07) participated in the study in exchange for course credit. The study was run in a behavioral laboratory with one participant at a time. Each participant was randomly assigned to one of two conditions: control or VR. Participants in both conditions were presented with the same video—that is, the custom designed office with the financial advisor offering budgeting advice. In the

control condition, participants viewed a 2D version of the video on a desktop computer. Participants in the VR condition experienced the session using HTC Vive—this equipment tracked participants' movements and displayed the virtual environment through the head-mount display in an immersive fashion. Participants were not given explicit instructions to focus on a specific field of vision and so were free to explore the virtual environment by turning their heads. After participants finished the video, we asked them to evaluate their likelihood to follow advice, their likelihood to change their budgeting behavior, and how engaging they found the experience to be.

Results

Consistent with our prediction, we find that receiving advice through VR increases consumer compliance because it is a more engaging medium. We used VR (vs. control) as the independent variable, participants' likelihood to follow advice as the dependent variable, and engagement as the mediator in a bootstrap estimation (PROCESS model 4; (Hayes, 2013) with 10,000 resamples. The indirect effect was significant (b =.53, SE = .13; 95% CI = [.31, .80]), indicating mediation. Specifically, VR evoked more engagement (b =1.02, SE = .19, p <.001). This, in turn, spilled over affecting the likelihood of behavior change (b =.40, SE = .07, p <.001). The residual effect of on likelihood to follow advice was significant (b =-.52, SE =.19; 95% CI = [-.89, -.16]), suggesting complementary mediation (Zhao, Lynch, & Chen, 2010).

To test whether engagement mediates the effect of VR on the likelihood of behavior change, we used VR (vs. control) as the independent variable, participants' likelihood to change behavior as the dependent variable, and engagement as the mediator to submit to a bootstrap estimation (PROCESS model 4; (Hayes, 2013) with 10,000 resamples. The indirect effect was significant (b =.36, SE = .11; 95% CI = [.19, .63]), indicating mediation. Specifically, VR evoked more engagement (b =1.04, SE = .19, p <.001). This, in turn, spilled over to affect the likelihood of behavior change (b =.35, SE = .07, p <.001). The residual effect of VR on likelihood to change behavior became nonsignificant (b =-.007, SE =.20; 95% CI = [-.40, .38])(Rucker, Preacher, Tormala, & Petty, 2011), suggesting indirect-only mediation (Zhao, Lynch, & Chen, 2010).

EXPERIMENT 2

Experiment 2 was designed to replicate the findings from Experiment 1 in the domain of dental advice.

Procedure

Following the procedure of Experiment 1, we programmed a new VR environment in Experiment 2 specifically designed to resemble a dental clinic. One-hundred-and-thirty-eight undergraduate students (55.1% females; M_{age} = 21) participated in the study in exchange for partial fulfillment towards course credit. As in Experiment 2, participation in this study was conducted one person at a time. Each participant was randomly assigned to one of two conditions: VR or control (2D video). In the non-interactive comparison condition, all participants viewed the same dentist providing oral care advice in the same office; however, rather than an immersive VR environment, participants in the non-interactive condition watched a video on a computer monitor.

Results

Consistent with our expectation and the results of Experiment 1, we found support for our prediction that compliance is enhanced with VR and that this occurs because VR is more engaging. Specifically, we again used VR (vs. control) as the independent variable,

participants' likelihood to follow advice as the dependent variable, and engagement as the mediator in a bootstrap estimation (PROCESS model 4; (Hayes, 2013) with 10,000 resamples. The indirect effect was significant (b =.25, SE = .08; 95% CI = [.12, .45]), indicating mediation (Figure 4a). Specifically, VR evoked more engagement (b =1.17, SE = .25, p <.001). This, in turn, spilled over to affect the likelihood to follow advice (b =.21, SE = .05, p <.001). The residual effect of VR on the likelihood to follow advice remained significant after accounting for the mediation (b =-.59, SE =.17; 95% CI = [-.92, -.25]), suggesting complementary mediation (Zhao, Lynch, & Chen, 2010).

To test our prediction that engagement mediates the effect of VR on participants' likelihood to change behavior, we used VR (vs. control) as the independent variable, participants' likelihood to change behavior as the dependent variable, and engagement as the mediator to submit to a bootstrap estimation (PROCESS model 4;(Hayes, 2013) with 10,000 resamples. VR evoked more engagement (b =1.17, SE = .25, p <.001). This, in turn, spilled over to affect people's likelihood to change behavior (b =.39, SE = .07, p <.001). The residual effect of VR on people's likelihood to follow advice was significant after accounting for the mediation (b =-.72, SE =.23; 95% CI = [-1.17, -.26]), suggesting complementary mediation (Zhao, Lynch, & Chen, 2010).

GENERAL DISCUSSION

VR research in marketing is nascent. This study uses a series of experiments to provide insights into the psychological mechanism that underlies the advantage of VR for giving and taking advice. In this paper, we propose and demonstrate that VR can have a positive effect on compliance because it creates a more engaging experience compared to a 2D video. In the pilot study, we examined perceptions of receiving advice through VR. In experiments 1 and 2, we tested engagement as the underlying psychological mechanism using an interactive VR environment purpose-built for these studies. In the context of financial advice, experiment 1 finds that the experience is evaluated more positively, and compliance is improved because people are more engaged in the VR environment. Experiment 2 replicated these results in the context of dental advice.

We contribute to the extant literature in two meaningful ways. First, we demonstrate that the medium through which advice is given can have a substantial effect on compliance. Specifically, we find that VR increases intentions to comply with both financial and dental advice. We, therefore, highlight the importance of the media context in advice taking, which has received little attention in the literature. Second, we reveal engagement as the process that mediates the positive effect of VR on compliance. This is a first step towards better understanding the psychological mechanisms that underlie VR's effectiveness as a medium of communication.

In practice, increasing the likelihood to follow advice can help mitigate the ongoing noncompliance epidemic in healthcare. By introducing advice through VR, healthcare practitioners may be better able to reach patients at a distance, thereby reducing the costs associated with long-travel and wait times. These results also have implications for personal finance and the effectiveness of advice giving and compliance in this domain, which in turn may have a positive economic effect as people make better budgeting, savings and debt management decisions.

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The Influence of Update Frequency on Consumer Judgment and Choice

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EXTENDED ABSTRACT

More and more products are regularly updated in order to improve functionality or to maintain consumer engagement; these include virtual products like smart device apps or software programs as well as physical products like tools or phones (the Samsung Galaxy A50 was updated and released four separate times over approximately 3 months in 2019). Although existing literature demonstrates individuals' focus on present attributes when evaluating owned or new products (Sweeney and Soutar, 2001; Sela and LeBouf, 2017), consumer responses to signals of product development are largely unexplored.

Further, a deeper investigation into products that undergo updates may be warranted as research shows that individuals value products differently when a new version is present. For instance, people are more careless with owned items when a new version is present in order to justify a new purchase (Bellezza, Ackerman, and Gino, 2017).

All else equal, research also seems to suggest that consumers may prefer more time between a new and an old version of a product. For instance, waiting longer to receive a product leads to higher quality ratings (Giebelhausen et al. 2011).

The current research seeks to explore whether consumers make any inferences about new products when the frequency of updates they undergo is made apparent. We find that individuals perceive products as higher quality (and as requiring more effort to produce) if they have been updated more frequently rather than less. This is seen when individuals are considering both products for which future updates will and will not provide costless benefits to the consumer (respectively, smart device apps participants read about in study 4, and physical devices participants read about in studies 1 through 3). Additionally, we find that individuals are particularly sensitive to the frequency of updates when all the options they are considering are updated less frequently than a standard.

We begin by testing whether the frequency at which updates are released changes the inferences individuals make about products in study 1 (N=183). Participants were randomly assigned to read about a new product that had either been updated at a high frequency (12 times a year) or a low frequency (once a year). To prevent associations unrelated to update frequency alone, the product category of the stimuli was left ambiguous and participants were told that products in the category were typically updated 3 times a year. Participants then provided ratings of perceived quality and effort to produce adapted from Aaker and Keller (1990). Ratings for individual quality or effort questions were standardized and combined to create overall quality and effort scores. In study 1, the product updated at a high frequency was rated higher in overall quality (=0.27; =-0.28, p<0.001) and effort to produce (=0.19, =-.19, p<0.001) than the product updated at the low frequency.

In study 2 (N=282) we investigate whether consumers value update frequency independently as a feature or as a signal of change. Participants learned about two products (construction measurement devices, updated 4 or 8 times yearly) that were either accompanied by information about identical changes being made or not (randomly assigned). Then participants provided ratings of the products' perceived quality and effort to produce. At the end of the study, participants also answered whether they would prefer a product that was updated at the high, standard, or low frequency they had seen.

As in study 1, the product updated at a high frequency was rated as higher quality (=0.25; =-0.25, p<0.001) and requiring more effort to produce (=0.25, =.25, p<0.001) than the product updated at a low frequency. Ratings did not differ significantly based on learning information about the changes made in the updates. Additionally, participants showed a preference for the typical frequency of updates (48.58%) over the high (40.07%) or the low frequency (11.34%) whether individuals read information about changes along with update frequency or not (p<0.001).

In study 3 (N=480), we test whether higher frequencies of updates are only valuable relative to a standard. Participants were asked to read about a construction measurement device undergoing a high frequency of updates (8) and one undergoing a low frequency of updates (4) side by side. They were randomly assigned to read that products in the given category were typically updated either 2, 6, or 10 times a year. Then, participants were asked which of the two products they would choose to purchase. At the end of the study, participants were asked to provide ratings of perceived quality and effort to produce for each product they had seen.

Participants were more sensitive to having the most updated version when both options were updated less frequently than the standard (66% preferred the higher frequency of updates, 8, when the typical was 10) compared to when options were updated at a rate above or near the standard frequency (45% preferred the higher frequency when the typical was 2; 56% preferred the higher frequency when the typical was 6): =15.9, p<0.001. Similarly, as the frequency of updates decreased relative to a standard, ratings of quality and effort decreased.

Study 4 (N=491) conceptually replicates prior studies using virtual products and finds the effects robust to expectations about future update frequency and other information about quality. Ultimately, results from these studies contrast some prior theories. More frequently updated items were preferred even when the same change was perceived between versions, contra Aaker and Keller (2010). Additionally, lower update frequency implied taking longer to produce an update, but products updated at a lower frequency were rated lower, contra Chinander and Schweitzer (2003). Together, findings from these studies demonstrate how individuals may be influenced by a signal that is becoming more prevalent in our environment as consumers.

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Table 1: Summarizing Results

Study	Independent variable	Dependent variables	Findings
1. Testing whether individuals make inferences from update frequency, N=183	Frequency of updates: High (12 times a year) or Low (1 time a year)	Ratings of quality (3 questions on Likert scales) and effort to produce (3 questions on Likert scales). Each set is combined and standardized for overall Quality and Effort ratings.	Individuals judged the product updated at a high frequency as higher quality than the product updated at a low frequency: $F_{(1,181)}=23.25$, $p<0.001$, $M_{high}=0.27$, $M_{low}=-0.28$. The high frequency product was also rated as requiring more effort to produce: $F_{(1,181)}=14.72$, $p<0.001$, $M_{high}=0.19$, $M_{low}=-0.19$.
2. Testing whether the frequency of updates is valued on its own or as a signal of change, N=282 AsPredicted #13359	Information about mechanical changes in the product: Present or not present	Ratings of quality (3 questions on Likert scales) and effort to produce (2 questions on Likert scales). Each set is combined and standardized for overall Quality and Effort ratings. Preference for products of different update frequencies seen	Individuals rate the product updated at a higher frequency as higher quality than the product updated at a lower frequency regardless of whether they saw information about changes or not: ($t=7.01$, $p<0.001$, $M_{high}=0.25$, $M_{low}=-0.25$). This was also the case for effort ratings: ($t=6.954$, $p<0.001$, $M_{high}=0.25$, $M_{low}=-0.25$). More people preferred a product updated at a standard (48.5%) or higher frequency (40%) than the low frequency (11%).
3. Testing whether individuals are only sensitive to update frequency relative to a standard, N=480 AsPredicted #14208	Standard frequency of updates: 2, 6, or 10	Intent to purchase either an option updated 4 or 8 times a year. Ratings of quality (3 questions on Likert scales) and effort to produce (2 questions on Likert scales). Each set is combined and standardized for overall Quality and Effort ratings.	Individuals are more concerned with having the most updated option when both options are below the standard frequency (66%) than when options are above or near the standard (56% and 45%): $X^2=15.9$, $p<0.001$.
4. Robustness check AsPredicted #18515	Context: Control, Whether other information about quality is available, Whether updates that provide costless benefits to the consumer will continue in the future	Ratings of quality (3 questions on Likert scales) and effort to produce (2 questions on Likert scales). Each set is combined and standardized for overall Quality and Effort ratings. Preference for products of different update frequencies seen	Individuals judge products updated at a higher frequency as higher quality even when there are future updates are held constant as well as when other quality cues are present: $t=-22.43$, $p<0.001$, $M_{high}=3.70$, $M_{low}=2.69$. This was also the case for effort ratings: $t=-17.33$, $p<0.001$, $M_{high}=4.19$, $M_{low}=3.28$.

The Productive Face of Consumption: An Integrative Review

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INTRODUCTION

Consumers, producers or both? Over the past 30 years, an increasing body of research have discussed the new roles undertaken by consumers and their changing relations with the market, blurring the distinction between producers and consumers. Various research attempts have been made to (1) conceptualize these consumers who produce (Campbell 2005; Cova 2008, Xie, Bagozzi and Troye 2008; Toffler 2014), (2) understand the possible interactions between these new consumers and the market (Prahalad and Ramaswami 2004a, b; Vargo and Lush 2008; Thompson and Coskuner-Balli 2007; Cova and Cova 2012; Martin and Schouten 2014), and (3) the consequences of new consumer-market relations (Holt 2002; Zwick, Bonsu and Darmody 2008; Ritzer 2015).

Although discussing the same phenomenon - consumers engaging in productive activities - this literature remains dispersed and often not engaged in dialogue. Thus, the aim of this conceptual paper is to propose an integrative framework (MacInnis 2011) that articulates the different streams of literature regarding the productive acts of consumers and demonstrate that this body of research discusses complementary facets of the same phenomenon. To build this framework, we draw on the notion of levels of analysis as proposed by Desjeux (2006), who claims theoretical questions are associated to particular framings of reality. Such integrative view of the literature then may foster the emergence of new research questions in the field (MacInnis 2011).

The framework also deals with another dimension of the phenomenon, whether it follows a consumer or a market perspective. For instance, a stream of existing research is concerned with the managerial perspective of the relation between consumers and companies (Prahalad and Ramaswami 2004a,b), considering its impacts on consumer's roles as partners in value co-creation (Vargo and Lush 2008; Lush and Vargo 2006) or as co-producers for the development of market offerings (Cova 2008; Ezan and Cova 2008; Cova and Cova 2012). The main contributions of these researches focus on managerial practices to recruit consumers for active collaboration and innovation in the marketing and production activities.

Conversely, several studies address how consumers engage in acts of production, using their productive skills, acquiring competences and changing their relation with the market (Goulding and Saren 2007; Watson and Shove 2008; Giesler 2008; Sandikci and Ger 2010; Scaraboto and Fisher 2013; Moiso, Arnould, and Gentry 2013; Wolf and McQuitty, 2011; Kjeldgaard, Askegaard, Rasmussen and Østergaard 2017). The main contributions rely on theorizing new consumption forms and their impact on power relations towards the market.

We propose an integrative framework, organized according to a) level of analysis (micro, meso and macro), and b) perspective on the topic (consumer or the market), as illustrated in table 1. The method employed to build this framework was a literature review on consumer behavior and marketing main journals. The purpose was not to present an exhaustive overview of papers but to represent the main issues emerging from the literature. Thus, in the following sections the current understandings about the phenomenon will be discussed based on the proposed epistemological structure of the integrative framework. The first section articulates the micro-agentic perspective of consumers engaging in domestic acts of production, followed by a critical macro discussion of the phenomenon and debates over consumer resistance against prevailing logics. Subsequently, recent streams of research will be presented, in the meso level, discussing different productive roles of consumers and their relation to market dynamics. Finally, future possibilities of research will be outlined as a result of the framework.

MICRO SOCIAL PERSPECTIVE OF DOMESTIC CONSUMERS-PRODUCERS

The most traditional stream of research takes a micro-social perspective, focusing on consumers engaging in productive activities in their private realm, identifying new consumer roles within an agentic perspective. Hence, those studies propose typologies of consumers who produce, outlining their main characteristics and motivations: (1) prosumers (Toffler 2014), (2) do-it-yourself consumers (Wolf and McQuitty 2011, 2013), (3) craft consumers (Campbell 2005), (4) creative consumers (Cova 2008; Türe and Ger 2016) and (5) partners in co-creation (Prahalad and Ramaswamy 2004a, b).

Introduced by Alvin Toffler in the 1980's, 'prosumer' is a neologism of the words "producer" and "consumer", meaning the actual phase of society where the consumer can produce what could be acquired in the traditional marketplace. Thus, the main idea of prosumers is that even though they can purchase from others, they choose to produce their own goods (Kotler 1986; Toffler 2014).

Aligned with the agentic perspective of the prosumer, the definition of DIY discusses the "activities in which individuals engage raw and semi-raw materials and component parts to produce, transform, or reconstruct material possessions" (Wolf and McQuitty 2011, 154). DIY activities relate to identity enhancement projects and lifestyle choices (Moiso et al. 2013; Williams 2004; Wolf and McQuitty 2013), often giving consumers a sense of empowerment (Wolf, Albinsson, and Becker 2015) to continue the "career DIY", that is, to keep engaging in new projects with more complexity and demanding different sets of skills (Seregina and Weijo 2017; Watson and Shove 2008). According to these studies, the motivation to engage in DIY activities lies in a search for identity differentiation that occurs when consumers use their handicraft abilities (Seregina and Weijo 2017; Wolf and McQuitty 2011).

Differently than DIY studies, for craft consumers (Campbell 2005) the productive activity does not necessarily involve material creation of an item, but the curation of mass-produced commodities employed as "raw materials". The idea of crafting involves making "from scratch", even if some pieces or ingredients originally came from the market. The underlying idea is that consumers control the whole process of manufacturing or assembling of items, investing skills, knowledge and passions in the process of making (Campbell 2005; Seregina and Weijo 2017).

Likewise, the concept of creative consumers (Cova 2008) refers to consumers that use manufactured products as platforms for creations, in individual or collective experiences. They consider themselves to be in more egalitarian relationships with companies, since they can share information with others and engage in activities to adapt, transform or modify products and/or their uses.

Considering the market's perspective in a micro-level, other studies propose that companies facilitate the productive activities of consumers by offering the platform, materials and knowledge with the purpose of co-creating value (Prahalad and Ramaswamy 2004a, 2004b; Vargo and Lush 2004, 2008) and not just embedding value in

Table 1: Epistemological Structure of Consumer Productive Activity Literature

Level of Observation/ Literature Perspective	Consumers' perspectives	Managerial perspectives
Macro-social observation scale Main features: Social Determination; Power Relations	**Main characteristics:** - Consumer reflexivity; - Consumer resistance against prevailing logics; **Main theoretical lens:** Foucault **Prior studies:** Firat and Venkatesh (1995); Holt (2002); Kozinets (2002); Thompson and Üstüner (2015); Karababa and Ger (2011); Thompson, Henry and Bardhi (2018)	**Main characteristics:** - Prosumer Capitalism - Governmentality **Main theoretical lens:** Foucault; sociological theories. **Prior studies:** Cova and Cova (2012); Ritzer (2015); Zwick et al. (2008); Ezan and Cova (2008)
Meso-social observation scale Main feature: Networks	**Main characteristics:** - Networks of consumers with active roles in market changes; - Systemic view; - Debates over the development of new markets, consumer networks and consumption communities. **Main theoretical lens**: ANT; Practice Theory; Institutional Theory **Prior studies:** Thompson and Coskuner-Balli (2007); Watson and Shove (2008); Karababa and Ger (2011); Scaraboto and Fisher (2013); Thomas, Price and Schau (2013); Martin and Schouten (2014); Scaraboto (2015); Figueiredo and Scaraboto (2016); Seregina and Weijo (2017); Kjellgaard et al. (2017)	**Main characteristics:** - Consumer as outsourcing of ideas for companies; - "Working Consumers" - Consumer made **Main theoretical lens:** post modernity; ANT. **Prior studies:** Cova (2008); Dujarier (2014); Humphreys and Greyson (2008); Cochoy (2014)
Micro-social observation scale Main feature: Consumer Agency	**Main characteristics:** - Consumer typologies; craft consumer; creative consumer; DIY; prosumer. **Main theoretical lens:** identity theories, anthropological theories. **Prior studies:** Campbell (2005); Cova (2008); Wolf and McQuitty (2011, 2013); Moiso et al. (2013), Toffler (2014); Wolf, Albinsson and Becker (2015)	**Main characteristics:** - Consumers as partners for value cocreation - Service-dominant logic; **Main theoretical lens:** neoliberal theories. **Prior studies:** Prahalad and Ramaswami (2004a, b); Vargo and Lush (2004, 2008); Lush and Vargo (2006); Xie et al. (2008)

the end product (Vargo and Lush 2004). Consumers, then, are considered as partners in the production activities promoted by companies, getting involved with their financial resources, available time and skills for their own consumption (Xie et al. 2008).

CRITICAL PERSPECTIVES ON CONSUMERS-PRODUCERS

The macro perspective on the phenomenon draws on a critical or structural view on the encounter of productive consumers and companies by considering social hierarchies, culture and power relations. Considering consumer-market relations, a stream of existing research understands consumers as passive targets of companies. They position the consumers-producers as a free working force being explored for the development of new products while consumers are engaged through partnership and empowerment discourses (Cochoy 2014; Cova 2008; Dujarier 2014; Humphreys and Grayson 2008; Ritzer 2015).

Drawing mostly on Foucaults's (2008) concept of governamentality, what is questioned by some authors is that behind the alleged consumer freedom and voluntary partnerships lies a political form of power that disciplines consumers, shaping their actions and allow-

ing them to be guided in a valuable way for companies (Thompson and Hirschman 1995; Thompson and Haytko 1997; Thompson 2004; Zwick et al. 2008; Ezan and Cova 2008; Humphreys and Greyson 2008; Cova, Dalli and Zwick 2011; Ritzer 2015).

By using expressions like "putting consumers to work" (Dujarier 2014; Zwick et al. 2008), "working consumers" (Cova et al. 2011) or "unpaid labor" (Ritzer and Jurgenson 2010), some authors discuss that products, services and even brands are being created in coproduction activities, increasing the companies' profit margins while these consumers receive no payment or profit-sharing (Cova et al. 2011). Consequently, consumer agency would be restricted by the market, assuring the competitiveness of corporations (Cova and Cova 2012; Ritzer 2015; Zwick et al. 2008).

While much of this literature comes from a theoretical approach, another stream of research grounded on empirical research and focused on the consumer's perspective of the production activities discusses a reflexively defiant consumer (Holt 2002; Kozinets 2002; Ozanne and Murray 1995; Thompson 2004; Thompson, Henry and Bardhi 2018) that engages in creative and even subversive acts of resistance as a response against prevailing market logics, even if unable to a complete emancipation from the market (Firat and

Venkatesh 1995; Holt 2002; Karababa and Ger 2011; Kozinets 2002; Thompson and Ustüner 2015).

By quoting Ozanne and Murray (1995), Holt (2002) conceptualizes the reflexively defiant consumer as a "consumer who is empowered to reflect on how marketing works as an institution and who uses this critical reflexivity to defy the code in his or her consumption." (Holt 2002, 72). In the study of the roller derby practitioners, for example, Thompson and Ustüner (2015) demonstrate how the countercultural resistance of consumers operate through market performances as a field for reconfiguration of practices and resignification of performances, in their case the ones associated with femininity.

However, in his research about the Burning Man festival, Kozinets (2002) already observes the difficulty in an emancipation from the market. Although the festival seems to offer temporary consumer emancipation, the process of differentiation against other consumers demonstrate that they are still part of market logics. This view is similar to Holt's (2002) argument that "consumers' ability to make creative and even subversive use of the marketplace does not equate to consumer emancipation." (Thompson 2004, 172). Thus, even the "unruly bricoleurs" that strive for differentiation (Campbell 2005) engage in consumption practices that end up being extremely productive for the market system (Holt 2002).

THE DYNAMICS OF CONSUMER-PRODUCED MARKETS

A more recent stream of literature regards the impact of consumer productive activities in the meso level (Desjeux 2006). Moving beyond the dichotomy agency-structure to approach this phenomenon in a systemic view, they discuss consumers as actively involved in production while associating with other human and non-human actors (Latour 2005) in consumer networks. Prior studies discuss how these consumer-produced networks (Karababa and Scaraboto 2018) impact market dynamics either unintentionally (Dolbec; Fisher, 2015) or intentionally as they seek to resist the market (Giesler 2008; Goulding and Saren 2007; Kozinets, 2002), search for inclusion and legitimation (Sandikci and Ger 2010; Karababa and Ger 2011; Scaraboto and Fisher 2013), try to change and reconstruct the market in the quest for alternative options (Thompson and Coskuner-Balli 2007; Kjeldgaard et al. 2017) and even create new markets through entrepreneurial activities (Martin and Schouten 2014).

In the study on consumers of plus-size fashion, Scaraboto and Fisher (2013) investigated marginalized consumers who do not reject the market logics, but instead seek inclusion in the mainstream market. Bearing on institutional theory, the authors present the concept of institutional entrepreneurs as "people or groups who attempt to act on their dissatisfaction in order to change the field." (Scaraboto and Fisher 2013, 1237). These individuals may not necessarily be entrepreneurs in the conventional sense of profit-seeking, but activists who want to promote market and/ or social changes.

In this regard, Sandiki and Ger (2011) study on Turkish covered women discussed consumers who have transformed the stigmatized practice of veiling into fashionable, developing a parallel taste structure. In so doing, these network of consumer innovators created conditions for the establishment of a new market segment, calling market attention to this group. However, when the market tries to engage in a process of co-optation to normalize the practices that came from this countercultural movement from consumers, a countervailing market response may question the legitimacy of the producers. Consequently, these consumer networks react by co-creating new market structures in the quest for alternatives to the traditional market logics, as proposed by Thompson and Coskuner-Balli (2007) in the study of a community-supported agriculture (CSA).

Engaged consumers can even be strategically oriented to change market dynamics as a consumer's collective action (Kjeldgaard et al. 2017). In the study of Danish beer enthusiasts, the authors demonstrate that enthusiasts might have an institutionalized role in the field while also having an impact in market logics. Martin and Schouten (2014), conversely, demonstrate that consumers can not only resist or alter, but also drive the emergence of a new market, even when there is no rejection of the existing structure. Initiated by consumers and with no formal incentive or support from the industry, the emergence of a new market was marked by the assembling of a community of practice that reunited enthusiasts, innovators and embedded entrepreneurs.

Similar to the institutional entrepreneurs from Scaraboto and Fisher (2013), the concept of embedded entrepreneurs (Martin and Schouten 2014) comprise other field-specific capital besides the symbolic such as "knowledge, skills, and material resources, which allowed them to co-create the material infrastructures of a new market". (Martin and Schouten 2014, 866). These consumers, then, engage in different productive roles that may change over time (e.g. do-it-yourself practitioners, embedded entrepreneurs) in a movement that contributes to the rise, development and legitimization of a new market.

The consumer collectives, then, locate in the borderline between the focus on consumer agency and the market perspectives by demonstrating how consumers connect and share practices, passions, brand devotions, rituals, resources and are capable of collective actions that impact the market (Muniz and O'Guinn 2001; Cova and Cova 2002; Cova 2008; Martin and Schouten 2014; Cova and Shankar 2018; Karababa and Scaraboto 2018).

CONCLUSION

The purpose of this study was to present a literature review on the productive activities of consumers by organizing these concepts and theoretical debates in three levels of analysis. Our aim was to broaden the research possibilities by demonstrating current debates and the possible connections and contrasts between them. An integrative framework may also contribute to more complex research projects, crossing boundaries and articulating agency and structure (Askegaard and Linnet 2011).

In this sense, we suggest a research agenda based on the proposed framework. Contributing to the micro-meso level and the consumer socialization literature (Ward 1974; Ekstrom 2006), we propose an investigation of the socialization process of becoming a producer and questioning the market. Is there a Producer Socialization? By considering other actors involved (e.g. family, peers, institutional actors, etc.), it is also possible to investigate how the network impacts the development of competence and influence future practices (Shove & Pantzar, 2005) and market relations, contributing to a theorization of consumer competence.

Regarding the meso level and the consumption communities' literature (Muniz and O'Guinn 2001; Cova and Shankar 2018), an interesting research topic could discuss how engaged competent consumers impact the development of communities in contexts in which the productive practices are the main linking value among its members. Engaging in a dialogue with the consumer-brand relationship literature (Fournier, 1998, 2014), it is also possible to investigate the changes in consumer-brand relations in communities of practice that share alternative practices to market options. Finally, in the macro-level, new research may investigate prosumer capitalism

and its relation to boycott and anti-consumption movements (Cherrier 2009).

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Marketplace Mythologies: Senses as Instruments of Powers and Resistances

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ABSTRACT

This qualitative study departs from conversations with women that have challenged social truths regarding menstruation through a change in their consumption practice. We analyzed narratives from interviews and social media posts. Findings reveal a connection between the (de)construction of certain marketplace myths and sensorial aspects when comparing alternative consumption practices.

Keywords: Marketplace Mythologies; Women's Bodies; Sensory Marketing, Menstruation.

INTRODUCTION

Different sources rebuke feminine hygiene products, such as disposable pads, which disseminate discourses on cleanliness and freshness (Park 1996). Marketplace mythologies are constructions that leverage cultural myths and serve the ideological interests of distinct market participants (Thompson 2004). Commercial mythmakers provide meanings to fill in perceived gaps or to ratify meanings considered to be threatened in their culture (Holt 2004; Kniazeva and Belk 2007). New market mythologies are formed, while the consumers articulate power discourses, in a simultaneous process of resistances and subordination (Thompson 2004).

This article aims at broadening the debates on market mythologies by analyzing the process of change from the consumption of disposable pads to the adoption of menstrual cups and the deconstruction of such market mythologies by women who have adopted the cup. A menstrual cup is a bell-shaped object containing a stem that is inserted in the vaginal canal, similarly to a tampon, able to collect menstrual blood for up to 12 hours. The product is reusable and may last around 10 years. It is commercialized as a more sustainable, ecological, economical, and also a healthier alternative. Recent studies have demonstrated menstrual cups' safety and acceptance among users (Beksinka et al. 2015; Howard et al. 2011; Rosas 2012; Shihita and Brody 2014; Stewart, Greer, and Powell 2010; Stewart, Powell, and Greer 2009). Included in the barriers to the product adoption, it is worth highlighting the fact that usage implies the contact of women with their genitalia and menstrual fluids (North and Oldham 2011; Stewart et al. 2009). Unfavorable reactions prior to the cup usage are directly associated with the negative perceptions regarding menstruation (Grose and Garbe 2014).

Cultural construction of menstruation as something "impure" and to be hidden point to old mythologies existing in different cultures (Alarcón-Nivia, Alarcón-Amaya, and Blanco-Fuentes 2016; Crawford, Menger, and Kaufman 2014; Delaney, Lupton, and Toth 1988; Mason et al, 2013; Mcpherson and Korfine 2004; Thakur 2014), and in different religions (Bhartiya 2013). In contemporary western cultures, menstruation still evokes negative attitudes (Schooler et al., 2005; Thornton 2013), and remains as something to be hidden (Chrisler 2011; Erchull et al., 2002), constituting a source of social stigma for women (Johnston-Robledo and Chrisler 2011). Menstrual hygiene products' advertisings perpetuate such negative perception (Erchull 2013; Luker et al. 1997; Merskin 1999; Park 1996; Simes and Berg 2001), given that they ratify messages relating the menstruating body to the antithesis of the ideal female body (Grose and Garbe 2014), and a notion that women need "protection from themselves" in order to feel free (Park 1996; Vostral 2008). An ethnographic study revealed a perspective on menstruation as a natural part of a woman's life and identity (Malefyt and McCabe 2016). Menstrual cups, as a reusable alternative, have already been considered inviable for some women used to the "efficiency, non-intrusiveness and discretion" associated with disposable sanitary pads (Ashley et al. 2005, p.207).

One way of transmitting cultural values, such as those related to menstruation, occurs through the senses. This means that the perception of the senses is also a culturally conditioned phenomenon. That is, the way people perceive reality varies as culture transforms (Classen 1997). Studies in the field of consumer culture theory seek to emphasize the role of the senses in consumption in a broader perspective that encompasses an assemblage (DeLanda 2006) of actors, objects, locations, experiences and atmospheres (Canniford, Riach, and Hill 2018; Hill, Canniford, and Mol 2014; Hill 2016).

In this paper, we extended this perspective investigating how is the relationship between the sensory perception and the power dynamics involved in (de)construction of the marketplace mythologies about menstruation. We believe that this study contributes to a critical look at marketing practices.

METHOD

This research was conducted using an interpretive paradigm, in which reality is understood as a social construction—multiple, holistic, and contextual (Hudson and Ozanne 1988). We have opted for a qualitative approach and data was collected from two sources: narrative interviews and social media posts.

Fourteen narrative interviews were conducted, adding up to 15 hours of recording, a total of 316 transcribed pages. The interviews followed a script comprising semi-structured questions (McCracken 1988) covering the theme of the feminine, interviewees' perspectives on menstruation, personal experience from menarche to the present days, including the use of disposable pads and menstrual cups.

We followed a Brazilian Facebook group dedicated to menstrual cups along four months. One of the researchers remained as an observer of the group's activities, without revealing the ongoing research or interacting with group members, so that interaction dynamics were not disrupted or caused any inhibitions to individuals belonging to the community. Aware of the possible ethical conflict regarding this stance (Kozinets 2010), gathered information became part of the analysis, albeit the community name remained confidential and quotations that could lead to the identification of members were not disclosed.

After four interviews were transcribed, we started the open coding process (Miles, Huberman, and Saldaña 2014). Coding helped the researchers to become familiar with the data, while enabling the identification of similar topics that have emerged in interviewees' discourses (Moisander and Valtonen 2006). Initially, 150 codes were generated and then they were refined and grouped into broader dimensions (Miles et al. 2014).

MENSTRUATION AND HYGIENE: MEANINGS AND RESIGNIFICATIONS

Respondents describe the transformation process of meanings related to menstruation, from negative to positive ones, questioning myths culturally constructed (Tan, Haththotuwa and Fraser 2017). As previously noted by different authors (Chrisler 2011; Erchull et

al. 2002; Joan and Zittel 1998; Kissling 1996; Lee 2009; Schooler et al. 2005; Thornton 2013), the group of women analyzed in this study discusses the changes in meanings, despite negative constructions being recurrently present when they refer to a subject that "nobody wants to talk about." Investigated women use collective instead of individual expressions in the speech, as if they were preserving the intimate nature of the topic, in accordance to the ways they were taught. They employ terms such as "the society"; "all the women;" "most of the people;" and/or "the feminine."

They want to differentiate and distance themselves from "the world" where negative associations occur and experience in what we have named "my world"—the one of positive associations and new practices—as illustrated in figure 1.

World:
"Me in the past"
"Many people"
"Women in general"
"Society"

My world:
"Me now"
"Empowered women"
"People that are rethinking these practices and traditional view"

Inner circle: Fertility / Strength of being a woman / Normal / Positive / Growth / Natural / Cycle / Health / Body Natural Reset / Self-Knowledge / Life

Outer circle: Stigma / Dirt / Shame / Limitations / Curse / Fragility / Problem / Bad Odors / Taboo / PMS / Disgust / Quarantine / Death / Eschatological / Inferiority

Figure 1: Separation of the "Worlds"

Interviewees still describe this "feminine moment" as "inconvenient" and "annoying," even though positive and proud narratives prevail due to the replacement of disposable pads by menstrual cups, which are practices perceived as something that makes them socially different and/or distant from the other "world."

Women report that their relationship and links with menstruation are modified as a result of menstrual blood resignification process, they reinterpreted the existing dichotomy clean–dirty related to this blood, which is reproduced in hygiene products positioning. The interviewees reverse disposable sanitary pads meanings by referring to them as "dirty" and "disgusting" because they show menstrual blood as "ugly", "dark", and "bad smelling". On the other hand, menstrual cups become a path to naturalize women's bleeding, depicting the blood as "beautiful," "bright red," "pretty," and "odorless." One respondent describes the ways by which the cup made her feel "very lively because it's a very pretty blood." Others emphasize different advantages such as "getting intimate knowledge of a woman's body," in addition to a greater "connection with the body," something that "liberates" them from "taboos" and market "impositions."

It's you understanding how you're inside. I had never used a mirror to see how I was down there. When I started to use the cup – "where am I sticking this in?" Because you don't learn how to insert it as a tampon, it's another position, another direction... the doctor puts his face down there in the middle and keeps looking, and we don't have a clue, an idea about how it is. This is mine, why am I ashamed? I started to deal much more naturally with my body. (Isabel, 29)

ABANDONMENT OF THE DISPOSABLE AND THE SEARCH FOR NATURALIZING THE BODY

Naturalizing the menstrual blood and the change in the relationship of this group of women with their bodies, which takes place from the moment they start using the cup, occurs in parallel to the criticism from the market of disposable products.

Shove (2003), when analyzing the concept of cleaning through the laundry activity, reveals that in the contemporary world the body is a constant source of pollution and contamination. In this view, the author also speaks of laundry as a process by which clothes are decontaminated and in which cleansing chemicals products add fragrances and contribute to the feeling of cleanliness and freshness. The group of interviewees opposes this notion of "excessive" cleaning associated with a diversity of products offered in the market. They associate menstruation with a cycle of nature and as something natural of the female body and therefore, something that should not be associated with dirt. Chemicals and non-natural substances, called sanitizers and disinfectants in the commercial discourse of cleaning products, appear in the reports and posts on the Internet as toxins and contrary to the body's health. Some respondents consider artificial smells present in disposable pads "unhealthy", a "hideous" and "oppressive smell", "a poison" that can cause "infection."

Disposable products appeal to convenience and timesaving, relevant strategic positioning differentials that influence the purchase and usage of such products (Bava, Jaeger, and Park 2008; Brown and Mcenally 1992; Carrigan and Szmigin 2006; Carrigan, Szmigin, and Leek 2006; Sheth, Sethia, and Srinivas 2011).

Interviewees question the convenience of disposable pads and defend the menstrual cup convenience, a reusable object that when compared to pads "ends up being more convenient" because "despite demanding more time for the change," it creates "less worries and more comfort." Respondents criticize the meanings disseminated by the market that describe disposable products as practical and convenient, disregarding environmental issues. The adoption of the menstrual cup goes beyond the product and gives rise to questions and reflections on consumption, sustainability and the feminine. Using the cup also means switching the look to inside the body, the search for self-knowledge, and distancing oneself from the consumption society and the large variety of brands and products. One of the interviewees explains: "you start to reflect upon everything that you're doing in your routine, what you're ingesting, using … a more mature way of making choices."

As they start to use the menstrual cup, respondents question mythologies and practices institutionalized by the market, opposing marketing influence and the logics of commodity capitalism. They resist the power of a discourse that leads to submission to another market (Thompson 2004) and move towards the myth of consumer sovereignty (Arsel and Thompson 2010) by challenging two culturally constructed myths: menstruation as something negative and disposable pads as a symbol of convenience and women's freedom. While defying this market mythology, they construct new narratives where sensory perception about menstruation is naturalized, and disposable objects characterization as convenient and practical is questioned. Table 1 shows how the separated worlds we found in their narratives (figure 1) are reflected in sensory experiences.

FINAL CONSIDERATIONS

Similar to the market of natural health studied by Thompson (2004), the interviewees defy a socially dominant discourse of power institutionalized in the context of menstruation and its relation to women's health. The menstrual cup as an object becomes a means for diverse questionings in regard to consumption mean-

Table 1: Women's Senses and (De)construction of Marketplace Mythology of Menstruation

Senses	Disposable Pads / Dominant Discourses "THE WORLD"	Menstrual cup / Alternative Discourses "MY WORLD"
Sight	• Blood looks dark and ugly on the disposable pad. • Shame of other people seeing menstruation (leakage/trail on trash) and fear of the social sanctions this disclosure would bring. • Menstruation as something dirty, eschatological • Images of menstruation generate disgust and are not shown anywhere / Pad's advertisings show a sterile (clean, white, "non-human") environment	• Blood looks alive in the menstrual cup and is described as beautiful and natural "the same that runs in our veins" • Menstrual blood images perceived as natural and sometimes even poetic • Observing changes in the blood amount and characteristics as a way to keep control of one's own health • Searching, reading and watching content about cups and menstruation before buying the product • Menstrual cup's aesthetical appeal ("a lot of colors, they are cute")
Smell	• In the pads menstruation gets smelly • Perfume on pads that masks menstruation smells are perceived as oppressive	• With menstrual cup, menstruation is perceived as "not smelly, not dirty, and with no bacteria"
Hearing	• Not something people like to talk about, specially men • "Secret that must be spoken in a whisper"	• Practice of menstrual cup led to more conversations about menstruation, especially among women, since it is "harder to talk with men" • Conversations challenge the stereotyped perspective of menstruation • Women become menstrual cup ambassadors, trying to convince others to use it
Touch	• Menstrual cramps • Avoid doing some activities, such as going to the beach and doing exercise. • Sex is almost forbidden during menstrual cycle • Not comfortable to use pads: sticking, itching, skinning and hurting the thigh	• Menstrual cramps are still an inconvenient • Touching one's own vaginal canal in order to find out the right size of the product and how to fit it • Touching one's own blood to clean the menstrual cup

Sixth Sense	• Didn't emerge in the interviews. Would it be hidden/ suffocated by the cultural context?	• The menstrual cup triggered new perspectives and new ways of being in the world, such as:
		  • Search for self-knowledge and connection with the body.
		  • Deconstruction of oppressive discourses about menstruation
		  • Connection with other women
		  • Attention to environmental issues
		  • Rescue of ancestry and connection with nature (moon phases, sacred feminine movement, veganism)

ings and practices. The use of the cup brings about a consumption logic capable of approximating what is at the intimate and individual level—natural to their bodies—to something collective and shared at a macro level. The menstrual cup links the body routines, the greater connection with menstruation and its nature, to questions related to environmental preservation. According to the interviewees, disposable pads generate major waste, pollute the environment, contaminate the body, and reinforce the negative view on menstruation. Using the menstrual cup means to free and protect oneself from disposables' harmful material and ideological influences. Menstrual cups' adoption is part of the quest for the natural in the feminine and in women's bodies, while also protecting nature. The accounts suggest that the use of menstrual cups is part of a moral critique towards consumption (Luedicke, Thompson and Giesler 2009). At the same

time, it defends a human being who uses consumption to make the world a better place (Cherrier, Black, and Lee 2011).

Having accepted the idea that consumers cannot escape the market (Thompson 2004), they resist power discourses which sustain menstruation as a problem, a curse, and a taboo subject, and connect to other discourses that promote the new feminine, the responsible consumption, and the consumer's sovereignty. This consumer resistance movement involves the change and training of the senses. Our interviewees reported the transformation of their sensations toward greater positivity and acceptance of their bodies moving away from the traditional marketplace myths associated with oppression.

As Claussen (1997) states, senses are culturally constructed. Our study emphasized how they are entangled to the process of (de) construction of marketplace mythologies. Sight, smell, hearing, and touch appeared impregnated in the power dynamics' present in my-

thologies. In our research, as in the work of Canniford, Riach and Hill (2018), the senses represented a political phenomenon, capable of encoding assemblages with meaning, power and resistances. We could also notice how the senses bring forth movements and changes in the assemblage. In this way, it is clear the importance of the political role of sensorial marketing and its possible contributions to cultural changes to embrace appreciation of diversity. In line with Hill, Canniford and Mol (2014), we call attention to more subtle aspects of consumer practices. As suggested by Valtonen, Markuksela and Moisander (2010) and Scott and Uncles (2018), sensory anthropology can be a long and fertile avenue for consumer behavior studies.

We believe that the scope of sensory marketing can be extended to capture the minutiae involved in consumption and transcend the limitations of the traditional five senses model (Kimmel, 2008). For this reason, we present what we refer to as a sixth sense, a set of findings that represented more intuitive, sensitive aspects that related to a new perception of the world, a new energy or atmosphere. The sixth sense seems to amplify intuition and the sacred feminine. Furthermore, the Sixth Sense seems to blur some traditional boundaries, enlarging the fluidity between body-mind, self-world, self-nature, and self-ancestry.

This fluidity between body and mind has implications for practioners. In the hygiene and beauty sector, for example, there is still a symbolic discourse focused on the possibility of reaching the ideal, the dream, the desire body or esthetics. However, our interviewee group moves towards present experiences of reconnection and acceptance of one's own body. At the same time, sensory experience are stimulating dialogues and reflexivity about gender and sustainability issues. These findings invite companies to rethink marketing strategies that promote dissatisfaction and non-acceptance of the body without knowing understand the mindful body experiences.

Finally, we would like to highlight that the women we interviewed reported that from the use of the menstrual cup, they transformed other consumption practices. Therefore, we believe that in the future it would be interesting to investigate more deeply the effects that a practice (such as the menstrual cup) and the resulting changes in the senses have in other consumption practices, understanding which are the triggers and how the assemblages are reconfigured.

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The Impact of Shopping Environment and Type of Data on Consumers' Willingness to Disclose Sensitive Data

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INTRODUCTION AND CONTRIBUTION

A key impact of the digital transformation of the economy is the increasing value of *data* (Tellis 2018) that can help to provide customers with personalized offerings (Tucker 2014). However, consumers are increasingly concerned about "data privacy", especially in e-commerce (Li, Sarathy, and Xu 2011; Martin and Murphy 2017).

We ask whether consumers' willingness to disclose private information is affected by the shopping environment (online as opposed to brick-and-mortar stores) and the *type* of private data that is requested. We focus solely on sensitive data (Lwin, Wirtz, and Williams 2007), but distinguish between sensitive data that potentially leads to a loss of face and sensitive data that raises security concerns.

Our goals are first to examine whether consumers' willingness to disclose information depends on a specific combination of shopping channel and the type of data requested, and second to investigate the accompanying emotional processes. Moreover, this research (a) contributes to the question concerning when (e-)privacy should be respected; and (b) is relevant for the field of consumer protection, if we find that consumers are too careless in providing sensitive private data.

THEORETICAL BACKGROUND: PERCEIVED RISKS, FACE THEORY AND SECURITY CONCERNS

Risks

Milne, Pettinico, Hajjat, and Markos (2017) identify four core risks: "(1) monetary risk is associated with potential financial loss, (2) social risk is associated with threats to an individual's self-esteem, reputation, and/or the perceptions of others, (3) physical risk is associated with bodily injury, and (4) psychological risk is associated with potential negative emotions such as anxiety, distress, and/or conflicts with self-image". These risks load on a two-factor solution (Principal Components Analysis): (1) psychological and social risk, and (2) monetary and physical risk. White (2004) states that the first factor consists of items that might damage one's reputation or lead to loss of self-confidence, and can be considered a *loss-of-face risk*. According to Lee, Park, and Kim (2013) the second factor (physical and monetary risks) can be considered a *security risk*. We argue that consumers' willingness to share private data depends on the type of sensitive information in question in combination with the shopping channel – that can differ with respect to anonymity.

Face Theory

Goffman (1967) defines 'face' as the "positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact". 'Face' is considered one of an individual's most sacred possessions. It can be seen as an individual's public image (Mao 1994) or as a social construct (White, Tynan, Galinsky, and Thompson 2004). Individuals do their best to secure this public image – a process referred to as "face-work" (Mao 1994).

When someone's 'face' is threatened, individuals react with negative emotions (Chen 2015), especially with *embarrassment* (White et al. 2004). Embarrassment is a social emotion (Miller 1996) which implies a social context: it requires an "embodied" or at least an imagined audience (Taylor 1985). It differs from shame. While embarrassment is crucially based on an individual's concerns about what others think about them, shame can be "an entirely internal experience with no one else present" (Kaufman 1996).

'Face threats' thus mainly occur in situations with 'social presence', which can be defined as "a communicator's sense of awareness of the presence of an interaction partner" (Weisberg, Te'eni, and Arman 2011). If the risk of losing face occurs particularly in social contexts, and is accompanied by the emotion of embarrassment, then we expect a higher level of anticipated embarrassment when consumers are asked for loss-of-face-risk information in a brick-and-mortar store than in an online situation.

Avoiding embarrassment is possible by avoiding scrutiny when an awkward situation has already arisen, and by changing one's behavior to prevent such a predicament occurring in the first place (Miller 1996). The second strategy is particularly relevant, as it is not possible to force someone to disclose embarrassing information: consumers can choose to lie, or to give no information. In an online shopping situation, we assume, they anticipate less embarrassment than in a brick-and-mortar store. As a result, people should be more truthful when shopping online:

Hypothesis 1   *When consumers are asked for private information that is associated with a risk of losing face, the tendency for them to give truthful answers is higher when shopping online than in brick-and-mortar stores. This effect is mediated by the consumers' anticipated embarrassment of making the disclosure.*

Security-risk information

When the underlying risk of disclosing private data relates to security concerns, we argue that the anonymity of the internet is counterproductive. An example of security-risk information is credit card details (Milne et al. 2017). Here, the relevant emotion is not embarrassment, but fear (Hille, Walsh, and Cleveland 2015), e.g. the fear that the credit card could be misused. Another risk is unveiling periods of absence at home. Consumer might associate their physical safety could be impaired. In our study, we again compare shopping online (low social presence) to shopping in a brick-and-mortar setting (high social presence). In the online setting, social cues are lacking, which implies a higher degree of obscureness in the communication (Mesch and Beker 2010). Thus, we expect the anticipation of fear to be strongly present in the online setting. That fear – according to Li et al. (2011) – explains why consumers are less inclined to share private data.

Hypothesis 2   *When consumers are asked to disclose private information that is associated with a security/safety risk, they are less willing to do so in an online than in a brick-and-mortar setting. This effect is mediated by fear.*

EMPIRICAL STUDY

All studies were conducted in Germany, where paying with cash is still most popular. In 2018, only every 20th transaction was carried out with a credit card.

Pretest

We carried out a pretest (n=35) in which we asked participants to rate several kinds of personal information for items relating to the two dimensions *loss-of-face risk* and *security risk*. On this basis, we chose for our main study: (1) the customer's height, weight and tendency to sweat (reflecting loss-of-face risk), (2) times during the day when nobody would be at home (security risk), (3) the customer's credit card details (security risk). In addition, we pretested whether the scenarios were reliable, which they were (M_{online} = 6.1, $M_{offline}$ 5.9 =, seven-point-scale).

Design

In our lab study (computer-assisted self interviews) we used a scenario technique in which participants would read a story about a shopping trip of a fictitious consumer ("Chris", who could be a male or female customer) and were subsequently asked how Chris would react. We chose this indirect method of questioning in order to reduce the social desirability bias (Fisher, 1993). The product chosen was a mattress, as buying a mattress is a situation in which either a salesperson (offline context) or the online tool could conceivably ask for sensitive information.

The scenarios began with Chris wanting to buy a new mattress as he/she had recently gained weight, leading to back problems with his/her previous mattress, and the information that Chris was now sweating more than in the past so wanted a mattress made from a different material – one that was better at dealing with moisture.

We then informed half of the participants in the study that Chris was going to a brick-and-mortar store to buy a mattress, and the other half that Chris was going to make the purchase online (between-subjects design). In the brick-and-mortar condition, Chris was approached by a sales clerk (male if Chris was male, and female if Chris was female), who asked Chris about his/her height, weight and tendency to sweat (loss-of-face-risk information) in order to help him/her choose the right product (in the online condition, participants were required to enter this information in the search filter of the shop's website).

First, there was a recall test in which participants were asked about relevant information in order to ensure that they had understood the scenario (participants not able to recall the story (n=12) were excluded). Participants were then asked to imagine that they were in Chris's shoes and to answer some questions from his/her perspective, indicating whether they thought Chris would (a) tell the truth, (b) say something euphemistic, or (c) refuse to answer the question(s), and then to rate Chris's anticipated emotions on a seven-point rating scale (used throughout the study) if he/she considered giving a truthful answer. Subsequently, we conducted a manipulation check for the loss-of-face risk. Next, we presented participants with the second part of the scenario, in which Chris had to choose a payment method (binary choice: credit card now vs. cash on delivery) and the second part of the questionnaire followed (anticipated choice of the payment method, anticipated emotions if using credit card; manipulation check).

Finally, we presented participants with the third part of the scenario, in which Chris had to choose a delivery option. Chris was informed by the clerk (brick-and-mortar condition)/by the program (online condition) that the mattress could be delivered the following week, but there were no more fixed appointments available. In other words, if Chris wanted fast delivery, he/she would have to indicate at which times and on which days nobody would be at home, in order to avoid unnecessary transportation costs (Delivery Option A). Alternatively, Chris could make an appointment for four weeks' time (Delivery Option B) which meant that Chris would not need to reveal (possible) security-risk information. At the end, we gathered some general control variables and conducted the manipulation check for security risk. Each interview lasted on average for 28 minutes.

Sample

The final sample consisted of 152 participants (mean age 24.08 years, 56.6% female). 72 participants were assigned to the online condition and 80 to the brick-and-mortar condition. The two groups did not differ with regard to age, gender, or education (all *p-values* > .542).

Dependent variables

Participants were asked to rate the emotions that Chris would feel when asked to disclose his/her height, weight and tendency to sweat (loss of face), when he/she paid by EC or credit card (Security Risk 1), and when he/she disclosed the information needed for Delivery Option A (Safety Risk). We measured *fear* (two items, adapted from Li et al. 2011) and *embarrassment* (two items, adapted from Dahl, Manchanda, and Argo 2001, both Cronbach's alpha >.*773*). To hide the goal of our study we also asked for anticipated positive emotions. Our first-choice variable (disclosure of loss-of-face-risk information) was coded into a binary-coded variable (truthful answers vs. other answers) to enable further analysis (last path mediator □ dep. variable = logistic regression).

Control variables

We measured participants' general privacy concerns, their previous experiences of being victims of invasions of privacy, their exposure to media reports about invasions of privacy, and their socio-demographic variables (Li et al. 2011). There were no significant differences between the groups (online vs. offline) with respect to these variables.

RESULTS

Manipulation check

Manipulation checks confirmed that disclosing one's height, weight and tendency to sweat was associated with loss-of-face risk, whereas the other two pieces of information were associated with security risk (all *p-values* < *.001*). The three risks did not differ with regard to the overall rating of sensitivity, but they differed in the *type* of risk that they represented.

Hypothesis 1

To investigate H1 we conducted a mediation analysis with PROCESS Version 3.2 (Hayes 2018), model 4, using 5,000 bootstraps. The independent variable (0=online; 1=brick-and-mortar) and the dependent variable (0=no truthful answer; 1=truthful answer) were dummy coded and the mediator was "anticipated embarrassment" (seven-point-scale). We found a significant negative indirect effect (b = -.6596; 95% BCa CI = [-1.1958; -.2643]; zero not included). The direct path was not significant (*p* = *.2778*), indicating indirect-only mediation (Zhao, Lynch JR., and Chen 2010). H1 was thus not falsified: When consumers are asked to disclose information involving a risk of losing face, they are more likely to disclose this information truthfully when shopping online. This finding is explained by lower anticipated embarrassment in the online situation.

Hypothesis 2

We argue that when people are asked to disclose security/safety-risk information, their anticipated *fear* is higher when shopping online, and that this should lead to a greater likelihood of choosing options in which they do not need to disclose any private data. Again, we conducted mediation analysis with PROCESS. The independent variable (0=online; 1=brick-and-mortar) and the dependent variable 0=option A (security-risk information required); 1=option B (sensitive information not required)) were again dummy coded. We used fear as a mediator. We found significant indirect effects for the delivery option (b = -.2597; 95% BCa CI = [-.5812; -.0500]; zero not included) for the mediator fear, indicating that the greater fear in the online condition ("a"-path is negative) does indeed lead to a stronger preference for options in which no sensitive data is required (compared to the brick-and-mortar condition; negative b-coefficients). We also found a significant indirect effect for the payment method (0=credit card; 1=cash payment on delivery; b = -.3412; 95% BCa CI = [-.7330; -.0788]; zero not included), that also supports H2. To summarize: When people have to disclose security-risk information, they experience greater levels of fear in an online setting (vs. offline), leading to a greater preference for options in which no private information ("nobody at home", "credit card details") has to be disclosed, as indicated by the significant indirect effects in both models.

DISCUSSION AND LIMITATIONS

Our findings are in line with our expectations. To our knowledge, this is the very first study investigating the combination of different types of risks with more- or less-anonymous shopping situations. Since we are just starting this project, we are aware of several limitations: Our sample consisted only of students. However, young people may be perhaps more careless than older consumers, thus the mean anticipated fear would be even higher if the sample were more representative, with a high proportion of older consumers. Young people may also be more accustomed to using credit cards. One more limitation is that we did not control for familiarity with the retailer (we did not specify the company), which could play a role. In a further study, we should focus on retailer names consumers are more or less acquainted with. In addition, examining scenarios is just the first step; a field experiment would enhance the external validity of the findings. In a currently conducted (replication) study, we change the product category (pharmaceutical products accompanied by more or less embarrassment (toenail fungus cream vs. hand cream) to investigate a second loss-of-face-risk case. Here, we also control for additional variables explaining the disclosure tendencies, such as perceived psychological distance (Construal Level theory) or further personality variables (light-heartedness/carefreeness vs. creepiness/discomfort tendencies of consumers).

IMPLICATIONS

People are more embarrassed when asked to disclose loss-of-face-risk information in a brick-and-mortar-store than online. We therefore recommend that retailers who regularly require this type of information – such as pharmacies and drugstores – respect consumers' concerns and offer, for example, not only privacy zones but also self-service terminals at the point of sale that could be useful for reducing the degree of social presence. With regard to security-risk information, we found higher degrees of fear in the online condition. Online retailers should therefore continue to invest in security infrastructure and proactively communicate to their customers the efforts they are making in order to reduce their fear. From a consumer-protection point of view, triggered fear could also be seen as a useful warning (a kind of creepiness) or a kind of advantageous 'gut instinct' not to divulge sensitive data. This could also be investigated in further studies.

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Making Sense of Healthcare Experiences. An Application of Story-Based Medicine

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INTRODUCTION

This paper uses a patient centric, storytelling methodology to contribute to our understanding of the patient experience. It is particularly focused upon questioning what data, collected through the medium of stories, tells us about the patient experience of healthcare. The value of listening to service users is pivotal to the Experience Based Design (EBD) movement which recognizes the role all users play in developing user-focused healthcare services (Bate and Robert, 2007). In EBD, as more generally, storytelling is a powerful medium for organizing and communicating experiences to others (Bate and Robert 2006). Stories generated may take many forms (Frank, 1991, 1995). Their application to healthcare contexts is particularly valuable as the discourse generated contributes to the 'person-centered' care agenda favored in healthcare delivery (Care Quality Council, 2014).

Health has been identified as an essential research priority for the science of service. It is also core to the transformative service research (TSR) agenda (Ostrom et al. 2015). This paper contributes to this research agenda particularly in relation to the service research priorities of: enhancing the service experience; and improving well-being through transformative service. It contributes to our understanding of EBD through listening to the story of one service user as she transitions from curative, to treatable, to palliative and end-of-life care. It is organized as follows. An initial literature review considers the existing approaches to patient experience research. Following a methods section, the story of Ma'am, our central character is detailed. Our discussion examines her story to determine the dominant factors modelling her experiences and how these might be captured in other settings. Conclusions and implications are then presented.

LITERATURE REVIEW

Patient experience data, often inter-changeably described as patient satisfaction data (Batbaatar et al. 2017), exists at both an individual level and collective level. It is collected through many different mediums such as traditional survey type tools: Hulka Patient Satisfaction with Medical Care Survey; and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey for instance, along with methods of descriptive feedback: interviews, critical incident techniques, patient narratives and observation for instance. Whilst survey instruments dominate, there is an appetite for, and appreciation of, the role qualitative research methods also play in understanding experiences. Finding ways of effectively deploying such methods, cognizant of their resource implications, is a recurring question (Health Foundation, 2013).

Hospital settings are frequently referenced in patient experience research (Mosadeghrad, 2014). Data collected in studies can be differentiated by in-patient and outpatient experiences (Beattie et al. 2014). Primary care has been extensively covered with studies detailed here indicative of the wider field of research. Greco, Brownlea and McGovern, (2001) examined the impacts and implications of different models of systematic patient feedback on the development of General Practitioner (GP) (akin to a Primary Care Physician (PCP)) interpersonal skills. European perspectives are offered by the work of Grol et al. (1990) who identified aspects of general practice that are generally evaluated by patients in a positive way. This included keeping records confidential, GP listening to patients,

consultation times and services in case of urgent problems. Where patients struggled to understand organizational aspects scores were higher in fee-for-service systems.

Whilst widespread application of different tools is evident, researchers and practitioners are increasingly questioning whether meaningful data, capable of contributing to the "uplifting changes" in patient care, so central to the TSR agenda (Anderson and Ostrom, 2015, 243), is being generated. A common conflict emerging revolves around what to do with the data generated. Undertaking a systematic review of patient satisfaction literature, Batbaatar et al. (2017) concluded that despite being extensively studied since the 1960s, literature has failed to produce a satisfactory framework to enable a deeper understanding of patient satisfaction. Observable is the tendency for data to be collected where it can be quantified, 'How quickly were you seen? 'On a scale of … how well does your practice …' question areas commonly recurring. Such practices has led to Wellings (2015) and others (Wensing, Vingerhoets and Grol 2003; InHealth, 2015) questioning "we have to ask ourselves, to what level are we just good at measuring things, but not good at doing something with all that data?"

Adopting EBD processes offer one mechanism for making data collected meaningful. This approach, grounded in design science thinking, "is not just about being more patient-centered or promoting greater patient participation. It goes much further than this, placing the experience goals of patients and users at the center of the design process and on the same footing as process and clinical goals" (Bate and Robert, 2006, 307). It is a user-focused design process intent upon uncovering key moments (moments of truth) and places (touchpoints) where subjective experience is shaped. Storytelling is pivotal to the process due to its capacity to introduce empathy, what works, what does not work and why into conversations (Charon, 2006). Storytelling bears witness to close and often personal or observable contact with systems (Hurwitz, Greenhalgh and Skultans, 2004). In so doing it offers a window onto not only the *'what needs changing'*, but also the *'how'* it might change.

Storytelling is informed by narrative theory which argues that most information stored and retrieved from memory is episodic. Encouraging people to tell their stories is an effective way to incite incidents, experiences, and evaluations. It allows people to share with the researcher *their* experiences, as opposed to the researcher imposing their beliefs in the form of predetermined interview or survey questions. The power of stories and storytelling lies in their capacity to achieve a deep understanding of consumers (Woodside, Sood, and Miller 2008).

METHOD

Research Design

Storytelling techniques were adopted for this study. Frank (1991) suggests four broad genres of stories exist: restitution; tragedy; quest; and chaos. This study is housed in the 'tragedy' genre: "The patient-hero struggles unsuccessfully to survive and be heard in the face of medical incompetence or insensitivity". This genre illuminates the practical and moral tensions which are embedded within the patient experience. Storytelling has been applied in many healthcare contexts (Greenhalgh, 2006), including palliative care where it

has been shown to be a humane method of data collection, providing the voice of patients and carers who may otherwise have been unable to participate in research (Gysels, Shipman, and Higginson, 2008; Richardson, 2014).

Data Collection

The story detailed shares the experiences of one cancer patient, Ma'am, captured through the ethnographer's toolkit of endless jottings, text messages, conversations and scratch notes (Atkinson et al. 2001). As a former Royal Air Force (RAF) non-commissioned officer Ma'am was used to rapid ascents. However her rapid ascent at the age of forty-five into the world of illness, "aggressive cancer" no less, took her completely by surprise. It began without warning in the summer of 2013 and ended, with equally little warning, in the winter of 2014. During this time she became a frequent healthcare flyer, moving between primary, acute and community care, at times on a daily basis, before spending her final hours in palliative care. In this world her operations, now named "procedures", revolved around the removal of lymph glands, the unstable insertion of tubes, stents and other interventions, and extensive radiotherapy executed on a daily basis for a period of two months. Explained, well intentioned, and "necessary" actions, the outcome of the treatment regime incapacitated Ma'am, stripping quality from her life in the process.

Data Analysis

Data Analysis with space constraints, only parts of the story can be shared here. In essence this represents a "selective representation of the key [dominant] themes and issues" (Palmer, 2005, 12) emerging within the parameters set by the research questions. Manual analysis has been applied to preserve the richness of the data.

FINDINGS

In this section we provide excerpts from Ma'am's story. These are illustrated through the quotations included in Table 1. We begin the story in the final weeks of her life. She is on the phone to us, telling us about her latest clinical encounter with a senior oncologist, one of the many clinicians she has had cause to meet in recent times. She does not know him. He is working as part of a team, in a general hospital. At a push she might be able to recall his name, but that would be the exception rather than the rule as so many health professionals she meets do not share this information.

She starts by apologizing to us for not successfully "fighting" her cancer, something instilled within her through the "language of warfare" (Sontag, 1983) she has been living with since her diagnosis. She's explaining to us that this consultant has told her, or rather *'injected reality'* that the cancer has spread, significantly (Table 1, quote f). What had started out as merkel cell cancer, a rare form of skin cancer, is now presenting as multiple cancers. Treatment is moving from treatable to palliative, end-of-life care. He has shared this information with Ma'am alone, having asked her family, her advocates, to leave the room first. She never recovers from this conversation, or the manner in which it is delivered.

Her treatment regime has resulted in multiple complications including lymphedema and physical impairments. Unwittingly she has become an expert in the 'patient experience'. She has lived it each day. Yet at no point during this journey has *her* 'patient experience' been documented. At no point following this journey was it documented either, her clinical needs always the focus of discussions. For Ma'am the lack of interest in her wider experience suggested the existence of ulterior hidden messages, that she was really facing a

Table 1: Narrating the patient experience

Illness Trajectory	Primary Touchpoints	Moments of Truth
Curative	General practice General hospital Specialist cancer hospital Community nursing Phlebotomy	a. "She said [receptionist] not to worry, I always seem to be sick in the morning so she's going to move my radiotherapy slots to later on in the day so I don't miss them". b. "She said [oncologist] she hadn't seen all the scans yet but I've been waiting three months for the feedback on the treatment (…). I thought that was what this appointment was about. (Ma'am). c. "He [doctor] remembered Mark was ill and came especially over to talk to me about him (…) It was so good of him, it really cheered me up (…). We chatted about Mark's problems. I feel better about that too". (Ma'am)
Treatable	General practice General hospital Specialist cancer hospital Community nursing Physiotherapy Phlebotomy	d. "…no-one has ever asked me about my experience (…) But if it's [cancer] aggressive, and rare, and how many times have we heard that? then shouldn't they want to know? (…) wouldn't it help them to look after it better? There must just be no hope and they can't face telling me…" (Ma'am). e. "They've told me they are going to try chemotherapy now but I need to go into Danebank [hospice] to build up my strength first (…). There's no bed apparently and I don't know whether I'm next or last on the list (…). Do you think they are trying to tell me something?" (Ma'am).
Palliative/End-of-Life Care	General practice General hospital Community nursing Physiotherapy Phlebotomy Hospice	f. "He [oncologist] told me 'I'm here to inject reality into the situation', I just feel so frightened now" (Ma'am) g. "I've [healthcare assistant] organized a nice bath and I'll bring some nice bubbles in (…) I got some lovely ones for Christmas (…). You'll love them, really lovely smell. The kids are trying to get to them too. I always feel so much more human after a bath, don't you?"

Source: Primary Data

death sentence which no-one wanted to document (Table 1, quote d). She was saddened and disconnected when actions which dominated her life appeared to be so inconsequential to others (Table 1, quote b). She continuously questioned the hidden messages periods of inactivity might be indicative of (Table 1, quote e).

She celebrated the episodes of service delight which appeared too during this time. The clinician who took time and trouble to pop by to chat with Ma'am, often, and particularly when he heard her husband had also been admitted to a separate hospital (Table 1, quote c). The healthcare assistant who went the extra mile (Table 1, quote g), and the receptionist who spent time re-arranging treatment slots to specifically accommodate times when Ma'am was least likely to be sick (Table 1, quote a). These actions generated strong feelings of a sense of worth for Ma'am. She felt valued. That her experience did matter.

DISCUSSION

According to The Picker Institute Europe (2009) patients seek: fast access to reliable health advice; effective treatment delivered by trusted professionals; participation in decisions and respect for preferences; clear, comprehensible information and support for self-care; attention to physical and environmental needs; emotional support, empathy and respect; involvement of, and support for family and carers; and continuity of care and smooth transitions. If this is so, then aside from examples of emotional support, empathy and respect (see Table 1, quotes a, c and g), Ma'am's story highlights many areas that scores would be low when quantified in a patient experience survey, if covered at all. Long periods of waiting for results, incomplete when finally delivered (Table 1, quote b). Interactions with professionals unknown to the patient, providing indigestible information (Table 1, quote f). Lack of continuity or opportunity to transition into different environments (Table 1, quote e). All from the short excerpt provided here.

Articulating these narratives through storytelling has allowed us to benefit from rich descriptions of experiences, whilst at the same time reminding us of the futility of developing data capture systems which measure only planned, expected and intentional actions. Ma'am's story enables us to move away from focusing upon experiences as isolated, almost time specific incidents, one doctor-patient consultation for instance, introducing instead a lens on experiences which cross multiple service settings. It captures insights into multiple issues at once, issues which matter to the patient, not necessarily appearing on a predetermined list. It helps us to shift the conversation and research imperative towards appreciating that different information is needed by different stakeholders, mapping out also who these stakeholders include. In essence, storytelling provides a window into patient lived experiences.

Experiences do not occur in a vacuum and are particularly messy to successfully unpack. Patient experiences perhaps more so as they are really immensely complex experiences of an immensely complex service where "services are dynamic, unfolding over a period of time through a sequence or constellation of events and steps" (Bitner, Ostrom and Morgan, 2007, 3). A visit to a GP/PCP, an outpatient, or inpatient clinic involves multiple actors onstage (eg doctors, nurses, consultants) and backstage (eg pharmacists, laboratory assistants), and multiple service encounters (eg consultation, blood tests, x-rays), in multiple settings (eg surgery, walk-in center, acute care) with multiple agencies (eg NHS, social enterprises). It also includes assessments linked to both human (staff) and non-human (infrastructure) factors. In effect what we are really saying is that it takes place within a service system involving "dynamic configurations of people, technologies, organizations and shared information that create and deliver value to customers, provider and other stakeholders" (IFM and IBM, 2008, 1).

LIMITATIONS AND OPPORTUNITIES

Stories enable us to see this system from multiple vantage points, primary care, acute care etc, appreciating the multiple stakeholders involved too: patients, family; friends; clinicians. They provide important service improvement opportunities for healthcare providers. In this paper these are linked particularly to communication, information dissemination and listening to patient needs. Communicating clearly who staff are, their role, the timeframe for treatment and feedback can instill calmness and understanding into the patient experience, further enhanced where information regarding reasons for periods of inactivity is disseminated. Asking the patient about their concerns, clinical and non-clinical, will alert the professional to the meaning attached to activities. In this story for instance, whilst delayed scan results will likely be an annoyance for healthcare professionals, for the patient, the meaning was far more sinister.

However, stories are by design wordy and resource intensive to collect. Whilst their richness cannot be disputed, the challenge ahead is in crafting them in a manner which meets the threshold of patient experience data needed i.e. systematic and rigorous. As this paper has outlined, EBD provides us with a design science based framework to direct us forward. Seeking ways to capture the key moments (moments of truth) and places (touchpoints) where subjective experience are shaped, central to EBD, needs to lie at the heart of this framework. Researching the effectiveness of adopting such a framework for data collection provides considerable opportunities for future research.

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How Employees Embody the Brand

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INTRODUCTION

In our everyday lives, we are constantly surrounded by images of "beautiful, thin, muscled, youthful bodies" (Tatum 2001, 124) in media. This increased focus on the body and its (perceived) perfection has given rise to an obsession with the human body within contemporary consumer culture (Featherstone 2010). Researchers agree that the body becomes a malleable object that consumers use for identity construction (Schouten 1991; Thompson and Hirschman 1995, Gannon and Prothero 2016; Roux and Belk 2019). The body is a feasible consumption object that requires work to meet socially desirable ideals. Aiming towards self-improvement, consumers employ a variety of techniques, including body building, tanning, tattoos, cosmetic surgery, or selfie photography (Bjerrisgard, Kjeldgaard, Bengtsson 2013; Giesler 2012; Kedzior, Allen and Schroeder 2016) to create coherent autobiographical narratives of the self (Giddens 1991).

Consumer research has predominantly focused on consumers' bodies and bodily experiences. For example, research shows how painful experiences remind consumers of their corporality and, thus, represent a regenerative escape from the self (Scott, Cayla and Cova 2016). The body and corporality has further been foregrounded in intense activities in nature, such as surfing or skiing (Canniford and Shankar 2013; Woermann and Rokka 2015). Research also pays attention to embodied practices and its deceleration capacities in slow-down experiences (Husemann and Eckhardt 2019). Bodies are effectively used to inscribe meaning but also negotiate and inhabit imagined and alternative identities (Roux and Belk 2019). Research on online bodily self-expressions has shown the excessive representation of bodies in identity assemblages that may even have the potential to destabilize brands (Rokka and Canniford 2016; Presi, Maehle and Kleppe 2016).

While consumer research has acknowledged the close relation of consumption and organizational identification (Press and Arnould 2011; Tian and Belk 2005), it has not acknowledged the specific role of bodies in identity construction, despite increasing attention on employee's bodies in organizational research (Michel 2011; Courpasson and Monties 2016; Coupland 2015). Perspectives on the body in organizations, on the one hand, often take a "physiological lens" (Heaphy 2007), assuming that the body is merely a biological object. In that sense, bodies are "docile" and thus easily governed element of the workplace (Brown and Coupland 2015; Foucault 1979), incorporated into organizational life as compliant workers (Valentine 2002). On the other hand, recent scholarship has approached the body from a cultural perspective treating it as a "problem", analyzing its cultural and normative constitution (Michel 2011). For example, prior studies investigated the link between bodies and the self in relevance to investment bankers (Michel 2011), police officers (Courpassion and Monties 2016), and professional rugby players (Coupland 2015). These studies find that employees' bodily efforts are closely associated with identity construction but also possible resistance against the organization (Michel 2011, Courpasson and Monties 2016). Yet, less is known about how employees' bodies and consumption relate, for example, concerning the employer brand. It is particularly relevant to understand how employees make sense of their bodies and how that impacts the brand to advance the terrain of branding knowledge.

In sum, the intersection of these closely relevant literatures highlights a novel pathway for consumer research: how a brand becomes embodied through its employees. We employ an embodied perspective to move beyond the Cartesian mind/body dualism and explore the active role of employee's bodies. The body is not a fixed or determined image, but it is constantly engaged in movement. Thus, we need to take into account the body in movement, involved in a complex set of relations to the spaces around it (Featherstone 2010). We aim to identify mechanisms of how the brand becomes embodied trough employees' bodily practices in different spaces – notably the private and work spaces. How do the brand and employees' bodies link together in these spaces?

Bourdieu's concept of habitus and cultural capital serve as a theoretical framework to explore the relationship between the embodied self and the organized individual (Coupland 2014). Brand and embodiment in the case of class has already been recognized by researchers (Dion and Borraz 2017). Drawing on Bourdieu's concept of the body as a form of capital, we aim to understand how practices of the social world shape the development of the worked-upon body of employees (Coupland 2015). According to Bourdieu, social relationships create habitus which is expressed in everyday contexts. The beliefs that order our behavior are not states of mind, but states of body, which operates through practical metaphors (Bourdieu 1990). Thus, it can be argued that working for a brand produces a particular type of body through mastery over particular kinds of socially produced movements, such as exercising or etiquette. Practices incorporated into the body are regenerated through embodied work, such as sport or training or any other physical appearance, called bodily capital (Wacquant 1995).

Furthermore, Bourdieu provides an analysis of control through embodiment. Also brands exercise certain kinds of control that bypass the mind and target a neglected domain: the body (Michel 2011). Whereas visible forms of control include for example established hierarchies (Edwards 1981), job descriptions or supervision (Barker 1993), embodied and less visible forms of controls, such as floor plans to organize bodies in space for optimal surveillance or work techniques that weave together bodies with productive artefacts (Foucault 1979) or socialization events to align employee's behavior in accordance with the brand's norms. These embodied forms of controls influence employees' conduct indirectly and unobtrusively (Michel 2011). Within this study we further ask: Which forms of controls do occur in different spaces and how do they shape employees' practices?

METHODOLOGY

The context is the global fashion brand Hollister, known for high aesthetical standards concerning bodily looks of their employees. Given the attention on the attractive bodies as a strategic brand association, it allowed the researcher to gain access to regular and ongoing discourses and practices of the employees and their bodies. To explore how employees embody the brand they work for, I draw on longitudinal auto ethnographic observations, through being employed as a full-time manager for the brand. This includes supervising more than 60 employees and observing their daily practices. The ethnographic research spanned from April 2015 - October 2016, accounting for more than 3000 hours of participant observation. Additionally, I conducted in-depths interviews with 7 employees supported by auto-driven photo-elicitation (Heisley and Levy 1991). The interviews were conducted in situ and nondirective in the sense that they allowed the respondents to talk spontaneously about their experiences working for the brand, including aspects of

identification with and embodiment of the brand in different situations spanning their private and worker roles. The focus of the photo elicitation was on the employees' social media profiles on Instagram. This research strategy was used to trigger discourse about how the employees framed their selves and the relation with the brand, online and offline. The participants varied in occupation within the fashion store (manager, brand representative, stock room associate) and were former work colleagues enabling insights involving a high level of trust. Interviews lasted from 45 minutes up to 1.5 hours and were transcribed in 97 pages verbatim of single-spaced text. Data analysis involved an iterative process of inductive categorization (Kreiner, Hollensbe, and Sheep 2006, Spiggle 1994) and abstraction to derive major themes arising through respondent's narratives.

FINDINGS

The findings shed the light on embodiment practices of organized and (un)obtrusively controlled Hollister employees. The study illustrates how employees' bodies move between three different spaces: the work space, the online space, and the private space.

1. WORK SPACE

The work space is a space, where the brand visibly controls the body of employees through hiring practices. In order to be able to work for the brand Hollister, employees need to fulfill certain bodily standards, as they are the representation of the "perfect body", as the following statement outlines:

'We were implicitly directed to follow a strict look policy when hiring new employees. Physical appearance mainly focuses on having the "right" body, which includes not being overweight and having an attractive overall appearance.' (auto-biographic statement).

As these policies concerning employees' bodies and appearance are communicated quite openly, employees are aware of entering a "body centered universe" (Wacquant 1995, 66). As one employee states, she felt extremely proud to pass the extremely controlled hiring process and to belong to this chosen group. This form of control is visible to employees and generates less visible forms of controls, such as peer pressure. Besides these controls, however, there are other forms of control mechanisms (Michel 2011), that target employees' bodies.

Invisible forms of controls, such as motivating employees to become the employee of the month or creating competitions among employees, indirectly guide employees to bodily enact the brand in a way that resonates with the brand. The findings further illustrate, that also other social actors govern employees' bodies.

'I often like to wear something from Hollister, as customers are coming and saying like "hey, do you still have the cardigan you are wearing?" …Just recently, I was wearing a red cardigan, which I then showed to the customer …and she bought it as well.' (Respondent 1)

Two mechanisms play here: the sense of being able to be recognized through embodied attitude by consumers, but also to looking good in front of other employees as the following statement outlines, which creates a lot of pressure, to continuously suit the body image of the brand.

'Every time I work, I see an item I like. And if I do not like it in the beginning, at the latest when somebody else was trying it I think "Ok, no actually it looks really good!" And the more

often I see it, the more I also want to have it and the higher is the chance you buy it.' (Respondent 3)

These practices demonstrate, how the organization of the body is a collective enterprise, where employees are performing a role due to being subject of surveillance, not only of managers, but also other employees and consumers. Thus, in Bourdieu terms, this space illustrates a habitus and field for the maximum of accumulation of bodily capital (Coupland 2015) and thus is under direct control of the brand.

2. ONLINE SPACE

Rokka. Karlsson and Tienari (2014) highlight that brands increasingly encourage employees to enact the brand, often in a favorable sense, but also knowing that they have limited control over such behavior. Prior literature describes the online space as a heterotopian space, where the self and the brand collide (Foucault 1986, Rokka and Canniford 2016).

On the one hand, employees embody the brand through enacting it on the official Hollister store account. The brand governs employees' bodies, as only a few employees are picked for public display online, depending on how well they suit the brand. The following statement underlines, that employees proudly give their bodies to the brand. Again, the role of other employees matters, as employees like to see and also aim to be seen by other employees.

'I really liked our Instagram store account, it was quite cute… I thought it was really cool… there were the people you knew and when you saw them on Instagram, it was kind of funny.' (Respondent 4)

On the other hand, employees present their bodies excessively on their private Instagram profiles, as the following statements illustrate.

'Pictures that are typically me, hmm… my ass pictures (laughing). … I mostly like pictures of my whole body.' (Respondent 4)

Contrary to heterogeneous microcelebrity practices of consumers online (Rokka and Canniford 2016), the findings show that employees bodily practices are much more homogeneous in online spaces, as the presentation of their bodies resonate with how the brand is. This illustrates, that employees' bodies in the online space are relatively under control, although not being directly controlled by the brand.

3. PRIVATE SPACE

As a strong contrast to the work space, one would expect that the private space is not controlled by the brand. However, the findings show, that the brand still invisibly controls the body of employees. It is therefore even more notable, that although not being directly controlled by the brand, employees embody and literally "live the brand" (Gotsi and Wilson 2001) with their whole body, as the following statement outlines.

'I seriously wear a piece of Hollister everyday… whenever I take something out of the closet, it is something from Hollister.' (Respondent 1)

Although there is no brand control, the accumulation of employees' bodily capital in social interactions in work and online space, creates a similar kind of habitus in their everyday private interactions. The findings further illustrate how employees' practices of embodiment move beyond themselves and also extend onto other

Table 1: Detailed summary of bodily practices

	Embodied Practices of Employees
Work space: Direct brand control	'I am not the person who likes to be over-dressed, because I think, especially when I go to work, I need to be dressed appropriately. I often like to wear something from Hollister, as customers are coming and saying like "hey, do you still have the cardigan you are wearing?" or "Do you still have this or that". Just recently, I was wearing a red cardigan, which I then showed to the customer, and it was on sale, and she bought it as well.' (Respondent 1) 'Every time I work, I see an item I like. And if I do not like it in the beginning, at the latest when somebody else was trying it I think "Ok, no actually it looks really good!" And the more often I see it, the more I also want to have it and the higher is the chance you buy it.' (Respondent 3) 'I mainly get inspiration from the forms, that we dressed in-store, or from other employees. For example, when we have an update and get a new collection and some other employee already bought something, like for example the cardigan, which I was wearing recently, I saw another employee first wearing it and she was saying "Look, you can find the cardigan there in the store, and we have these different colors". She took it in green and I took it in red then, as red is such a beautiful color for winter.' (Respondent 1) 'Every time I work, I see an item I like. And if I do not like it in the beginning, at the latest when somebody else was trying it I think "Ok, no actually it looks really good!" And the more often I see it, the more I also want to have it and the higher is the chance you buy it.' (Respondent 3)
Online space: Indirect brand control	'I really liked our Instagram store account, it was quite cute… I thought it was really cool because, we also took part in the mannequin challenge, for example, at the time it was popular and there were the people you knew and when you saw them on Instagram, it was kind of funny.' (Respondent 4) 'When I started working for Hollister, we also had an Instagram account for our store and I was shot twice for it with an outfit.' (Respondent 3) 'Pictures that are typically me, hmm… my ass pictures (laughing). … typically, me is wearing a bikini and being in this posture. I think the beach vibe is something that comes across well on Instagram… I wouldn't post a picture, where my face is too present on the picture, I just don't like that. I mostly like pictures of my whole body.' (Respondent 4) 'Well… typically me are also these shirtless pictures… I think, in summer it just looks good.' (Respondent 6) 'When we were reopening our new store they posted a picture from our team which was reposted from the workathco account. I was not on the picture as they forgot me in the Gilly Hicks store (laughing). … I would have liked to be on the picture, especially because they were saying that we all need to be dressed in black this day.' (Respondent 1)
Private space: Not much brand control	'I seriously wear a piece of Hollister everyday (laughing). Just because it is really comfortable to wear and my whole wardrobe is full of Hollister clothes and whenever I take something out of the closet, it is something from Hollister. And whenever we get new pieces in-store, there is always something I want to have.' (Respondent 1) 'There is at least one piece of Hollister included in my outfit everyday (laughing). Whether it's a jean, a bralette or any t-shirt or pullover, there is always something from Hollister.' (Respondent 3) "… since my boyfriend and I am together, he owns a lot more clothes, but also only from Hollister… before as far as I know, he did not go to shop at Hollister. He had a winterjacket probably from Hollister, but other than that nothing.' (Respondent 1) '.. you don't need to have the perfect skinny body, that the brand fits you. It also fits stronger silhouettes. My mother and grand-mother for example both wear Hollister jean, even my grandmother with 75 years old likes Hollister jean.' (Respondent 1) 'If I wear something from Hollister, also my mother is asking me and wants to have it as well… ' (Respondent 1) 'There is at least one piece of Hollister included in my outfit everyday (laughing). Whether it's a jean, a bralette or any t-shirt or pullover, there is always something from Hollister.' (Respondent 3)

bodies. This happens, as their social environment still requires them to perform their working role, also in private space.

> '… since my boyfriend and I am together, he owns a lot more clothes, but also only from Hollister… even my grandmother with 75 years old likes Hollister jean.' (Respondent 1)

Most surprisingly, the findings illustrate how the brand, through employees' bodily practices, also extends onto heterogeneous bodies, which do not fulfill the bodily image of the brand.

DISCUSSION

This study sheds light on how brands craft the worked upon embodied experiences of employees in three different spaces (work, online, private) through exercising (in)visible forms of control targeting their body. The findings reveal elements of employees' body-work as socially organized practices of consumers, employees and the brand. Employees' bodies, through engaging in socially structured activities, are shaped to support particular activities occurring in these spaces (Bourdieu 1977, Giddens 1991, Michel 2011). While bodies of employees are directly controlled by the brand in the work space, invisible forms of control govern bodies in the online and private space. Employees are unconsciously driven by the brand and

thus, the brand's control resonates quite widely, even into private space. This study advances knowledge on branding offering several contributions.

First, the study expands knowledge on bodily controls in consumer research, illustrating how the brand exercises control over employees' bodies and how this control is translated in employees' bodily practices. This control is socially established, via interactions with other employees – and their social media sites. The study highlights that the body internalizes certain kinds of control, often learned at the workplace but enacted at home and in the private sphere. In sum, this study illustrates how brand's control resonates quite widely, even into the private space, although the brand legally speaking, does not control bodies.

Second, the study extends the discussion on body and spaces of Roux and Belk (2019) by considering the working body. Whereas the body is conceptualized as a topia, an inescapable place the self inhibits (Roux and Belk 2019), we find that in relevance to the working body, also other actors, such as brands, are involved.

Third, this research advances Tian and Belk's (2005) theorizing about the relation of consumption and organizational identification through focusing on the body. As Tian and Belk (2005) show, employees use brands to construct identities. This study finds that also the inverse happens: employees use their employer brand in identity building in private spaces. Agreeing with Press and Arnould (2011), this study finds that the work role and the consumer role have been treated too distinctively—they are very close and intertwined in practice.

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Testing Moderation and Moderated Mediation of Intent in an Advertising-Adoption Link

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INTRODUCTION

Consumers' stated purchase intentions are one of the primary inputs that marketing managers use to forecast future sales and to determine how the actions they take will impact consumers' purchasing behavior (Morwitz 2014). Purchase intentions are often used to measure consumer demand for new products using concept and product tests. Marketing managers also use purchase intentions as a leading indicator of future demand for their products, and to assess how their marketing actions will impact those future sales.

One approach to forecasting a new product's sales is based on a potential consumer's intention to buy. The importance of intentions as indicators of purchase behavior is perhaps most attributed to Fishbein and Ajzen's seminal attitude→intenion→behavior framework (1975). More recently, extant literature in the social sciences has given considerable attention to intentions and the relationship between intentions and actual behavior. For example, Morwitz et al. (2007) provide a comprehensive analysis of the relationship between purchase intentions and behavior while others have taken a modeling perspective (Shugan and Swait 2000; Sun and Morwitz 2010). The basic premise behind using intention measures as indicators for purchase behavior is that there is some useful information contained in these measures that reflect consumers' likelihood of purchasing the new product. Contrary to past efforts that specify intent as a mediator, we propose and test an alternative perspective that treats intent as a moderated mediator.

Predicting movie box office revenues offers a unique opportunity to study the relationships among advertising, intentions, and demand, including potential moderator and mediator effects. Specifically, rather than intentions acting simply as a mediator of the advertising → box office gross relationship, we argue that the intentions → box office link is also moderated by affect, prescreening liking. Conditional process analysis (Hayes 2018) is used to examine how intent mediation is moderated by affect based on the attitudinal tracking data.

CONCEPTUAL FRAMEWORK

Our primary theoretical framework as outlined above is presented in Figure 1 (Model 3). We also analyze two additional models deemed plausible based on past research. The first specifies intent as a simple moderator between advertising expenditures and gross box office sales and the second is consistent with the traditional intent → behavior framework.

We present different relationships specified in Figure 1, by examining the mechanism of how advertising influences box office gross. Past research across multiple industries has explored the relationship between advertising expenditures and sales with mixed results (Kamal and Wilcox 2014; Wilcox et al. 2009; Zhou et al. 2003). Most relevant, a number of studies have established a significant link between advertising expenditures and box-office gross (Elberse and Anand 2007; Gunter 2018; Rao et al. 2017; Zufryden 1996). The fact that almost 90% of a movie's advertising budget is allocated in the weeks leading up to the theatrical launch (Elberse and Anand 2007) shows the importance of prerelease advertising. The number of screens on which a movie is released has been recognized as one of the most significant factors related to box office sales (Elberse and Eliashberg 2003; Joshi and Hanssens 2010; Neelamegham and Chintagunta 1999). Thus, prerelease advertising spending should be

considered as an endogenous factor as movies that are expected to generate high box office grosses tend to receive more advertising dollars and wider distribution. That is, advertising spending is likely to be determined by expected box office revenues.

As advertising opportunities increase and new media platforms emerge, the study of the relationship between advertising expenditures and purchase intentions has also evolved (Eisend and Tarrahi 2016). Berger and Mitchell (1989) show that advertising repetition impacts the traditional attitude-behavior relationship such that advertising can have a direct impact on intention with little or no effect on attitude. More recently, the basic advertising to intent relationship has been explored across multiple domains. For example, mobile advertising increases retail purchase intentions (Bues et al. 2017; Martins et al. 2019) and Facebook advertising enhances brand image and ultimately consumer purchase intentions (Dehghani and Tumer 2015). In a market research study, Morwitz (2014) discusses how marketing actions can change purchase intentions and ultimately change behavior.

A vast amount of literature has explored the direct intent → behavior relationship based on the attitude → intent → behavior framework. More recently, researchers have explored the impact of various conditional factors. For example, a meta-analysis across different settings reveals that intentions predict sales more strongly for existing versus new products, for durable versus non-durable goods, for short versus long time horizons, and for specific brand versus product category intentions (Morwitz et al. 2007). However, to our knowledge, few have considered intent as a moderated mediator. Past literature supports that measuring intentions just prior to purchase provides a better prediction of actual purchase as compared to when intentions are measured at an earlier time (Morwitz 1997). It is similarly reasonable to assume that attitudes and intentions measured immediately prior to a movie's release are more likely to be diagnostic of a consumer's actual behavior as measured by box office gross (Chintagunta and Lee 2012). In response, we argue that consumer evaluations assessed at pre-screening events moderate the intent → opening box office relationship. We propose a moderated mediator model where consumer intentions mediate the relationship between advertising expenditures and box office sales. In addition, incorporating pre-screening liking as a moderator between intent and box office sales improves overall model fit and sales predictability.

METHOD

The data used in our study is the film tracking data of 52 movies released by one of the major US studios, collected by a marketing research company in the movie industry. Advertising spending data is obtained from AdSpender and the opening box office data are based on IMDb, which include all major theater chains and independent theaters in the US. We then adjust box office revenues for the seasonality and the number of opening theaters to address endogeneity issues (Chintagunta and Lee 2012). To measure purchase intent, the company conducts a telephone survey with randomly chosen households with sample size of approximately 400 respondents each period. A set of questions about new movies as well as movies currently playing in the market is asked typically starting from 4 weeks prior to opening to 2 weeks after the opening. The same set of questions are asked 3 times a week to a different set of respondents primarily to track potential viewers' intent to view. Based on the binary measure

(yes/no), we obtain the aggregate-level intent over time with other demographic variables.

A statistical model of intent mediation and moderation is specified below, where advertising spending (X) affects opening box office revenues mediated or moderated by intent. The modeled mediation is likely contingent and hence moderated, in that the process operates differently for different people or in different contexts. Therefore, we test a moderated mediation effect, which is conditional process analysis (Hayes 2018; Preacher et al. 2007). From pre-screening views before release, studios obtain viewers' liking after watching the movie. Since it is a direct input prior to release, we test the contingent moderation of audience liking (L) on the mediation effect of intent (I) to opening box office sales (Y). Specifically, as illustrated in Figure 1, we test three alternative models (M1, M2, M3).

(1) Intent Moderation (M.1)

(2) Intent Mediation (M.2)

(3) Moderated Mediation (M.3)
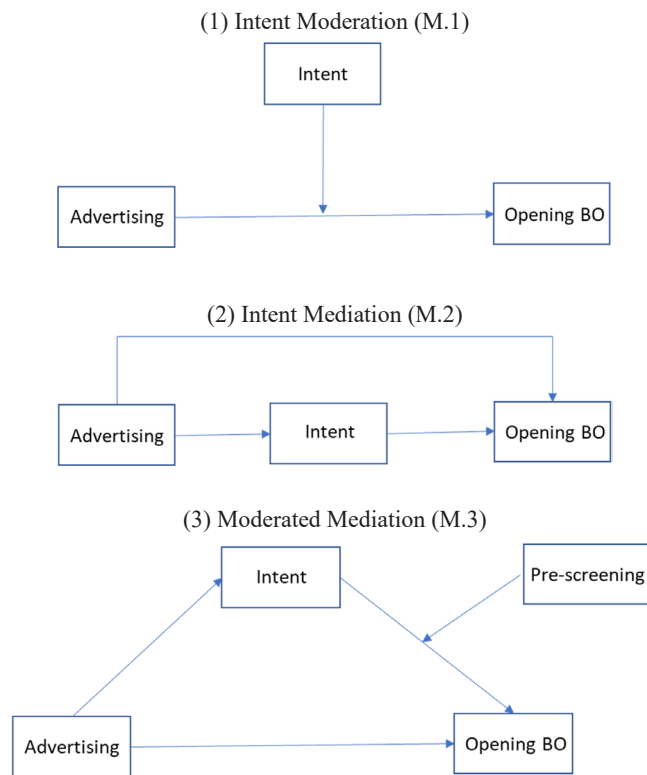
Figure 1: Diagram of Conceptual Models

M1: Intent moderation

$$Y = i_Y + b_1 X + b_2 I + b_3 XI + e_Y \tag{1}$$

M2: Intent mediation

$$I = i_I + aX + e_I$$
$$Y = i_Y + cX + bI + e_Y \tag{1}$$

M3: Intent mediation moderated by pre-screening evaluation

$$I = i_I + aX + e_I$$
$$Y = i_Y + cX + b_1 I + b_2 L + b_3 IL + e_Y \tag{1}$$

RESULTS

Intent moderation

When the strength of the relationship between two variables is dependent on a third variable, *moderation* is said to occur. As shown in Figure 1(1), a moderator (intent), interacts with advertising in predict-

ing box office sales if the regression weight of advertising varies as a function of intent. To test the moderation by intent, a term is included in the regression model that allows advertising effect to be a function of intent. Table 1 shows the regression coefficients along with their standard errors, t- and p-values, and 95% confidence intervals.

All models are estimated using PROCESS macro (Hayes 2018). As shown in Table 1(1), there is a significant direct effect of advertising on opening box office sales. Importantly, the coefficient of the advertising x intent interaction term ($b = 2.325$) is statistically different from zero ($p < .01$). So, we can conclude that the effect of advertising on box office sales is moderated by intent. That is, the advertising effect depends on the likelihood to watch the movie in the opening week. This moderation component of the model explains about 3.6% of the variance in opening box office sales, as calculated from the difference in R^2 for the model that includes the term ($R^2 = .976$) compared to the model that excludes it ($R^2 = .940$). This may be thought of as a measure of the "size" of the moderation effect (Hayes 2018), though reducing effect size to a single number may oversimplify the complexity and subjectivity of this problem (Darlington and Hayes 2016). By inserting binary values of intent into M1, one gains insight into how the differences in opening box office sales are a function of intent. Based on these calculations, it appears that viewers with lower intent show weaker responses when reached by advertising. However, among those at the higher end of the intent continuum, the opposite is observed.

Intent mediation

Regarding the mediating role of intent, we empirically test a causal process that involves a mediation component. Mediator variables function as the conduits through which causal effects operate.

Table 1: Estimation Results (M.1-M.3)

(1) Intent Moderation

M.1	coeff	s.e.	t	*p*-value	LLCI	ULCI
constant	1.440	0.735	1.961	0.056	-0.037	2.917
advertising	0.391	0.043	8.998	0.000	0.304	0.478
intent	-30.387	14.817	-2.051	0.046	-60.178	-0.596
intent x advertising	2.325	0.858	2.710	0.009	0.600	4.049
					R^2 = .976 / MSE = .007	

(2) Intent Mediation

M.2	coeff	s.e.	t	*p*-value	LLCI	ULCI
(A → I)						
constant	-0.707	0.163	-4.347	0.000	-1.033	-0.380
advertising	0.045	0.010	4.683	0.000	0.026	0.064
					R^2 = .305 / MSE = .001	
constant	-0.004	0.537	-0.007	0.995	-1.083	1.076
advertising	0.475	0.032	14.753	0.000	0.410	0.540
intent	9.753	0.398	24.491	0.000	8.953	10.553
					R^2 = .973 / MSE = .008	

(3) Moderated Mediation

M.3	coeff	s.e.	t	*p*-value	LLCI	ULCI
(A → I)						
constant	-0.707	0.163	-4.347	0.000	-1.033	-0.380
advertising	0.045	0.010	4.683	0.000	0.026	0.064
					R^2 = .305 / MSE = .001	
constant	0.160	0.303	0.529	0.600	-0.449	0.769
advertising	0.455	0.019	24.498	0.000	0.417	0.492
intent	4.935	0.830	5.945	0.000	3.265	6.606
pre-screening	1.135	0.164	6.938	0.000	0.806	1.463
intent x pre-screening	4.981	1.929	2.582	0.013	1.100	8.862
				Index of moderated mediation = .22 (.10)		
					R^2 = .992 / MSE = .002	

When some causal variable X transmits an effect on Y through a mediator M, it is said that X affects Y indirectly through M. In this case, we are interested in the estimation and interpretation of the direct effect of advertising and indirect effects. That is, we estimate the components of the indirect effect, that is, the effect of advertising on intent as well as the effect of intent on opening box office sales. Thus, we estimate the total effect of advertising on box office sales as well. The simple mediation model is shown in Figure 1(2). Since there are two consequent variables, two linear models are required, where i_I and i_Y are regression constants, e_I and e_Y are errors in the estimation of intent and box office sales, respectively. These two pathways of influence sum to yield the total effect of advertising. The direct and indirect effects of advertising spending on box office sales are estimated by the proposed mediator, intent, that is regressed on advertising, and box office sales are regressed on both intent and advertising.

Based on the results in Table 1(2), multiplying two path coefficients yields the indirect effect, 0.045 x 9.753 = 0.439. So, one unit change in advertising is estimated to differ by 0.439 units in the dependent variable, box office sales. Advertising increases intent to view (positive A → I coefficient), which in turn translates into greater box office revenues (positive I → Y). This indirect effect is statistically different from zero, as revealed by a 95% bootstrap confidence interval that is significantly higher than zero (0.28 to 0.62 in the PROCESS output). Regardless of the level of intent, the direct effect of advertising (0.475) is statistically significant ($p < .0001$) with a 95% confidence interval from 0.41 to 0.54.as in the previous model. The total effect of advertising on opening box office sales is derived by summing the direct and indirect effects, 0.475 + 0.439 = 0.914. The significant mediation effect in advertising is consistent with the findings from hierarchy of effects model studies in advertising (Barry 2002; Wijaya 2012).

Intent mediation moderated by pre-screening evaluation

Next, we test a moderated mediation model when the mediation path is moderated by the third variable, evaluations from pre-screening of the movie. As before, we use a mediation model in which advertising (X) leads to higher intent to view (M), then affects opening box office sales (Y). Incorporating viewers' evaluations after screening (W), which is the only "after-trial" input before release, allows us to test a complex causal model referred to as conditional process modeling (Hayes 2018). That is, the effect of intent is hypothesized in this model as contingent on the pre-screening evaluations of the movie on box office sales for viewers with positive or negative ratings. A conceptual diagram corresponding to this process is shown in Figure 1(3). This is a conditional process model containing a mediation process (X→M→Y) combined with moderation of the M→Y effect by W. It translates into a set of two equations as in equation (3) above. The regression coefficients and model summary can be found in Table 1(3).

As before, advertising spending significantly enhances intent and also has a significant direct effect on opening box office revenues, as reported by Chintagunta and Lee (2012). Furthermore, the effect of intent on box office sales is indeed contingent on pre-screening evaluations, as evidenced by the statistically significant interaction between intent and evaluations (=4.981, $p < .05$). The separate coefficients for intent and evaluations are conditional effects given their product in the model. The effect of intent on box office sales is positive and statistically different from zero (=4.935, $p < .00$), and the regression coefficient for pre-screening evaluation is also significant (=1.135, $p < .00$). Combined with the interaction effect, this implies that, among viewers equal in advertising and expressed intent, they are more likely to go to movies that they gave a positive pre-screening evaluation than those moviegoers who did not express an intent to view. The weight for the moderator, pre-screening evaluation, is called the index of moderated mediation (Hayes 2015). The index value (0.22) can be interpreted as the slope coefficient. If the slope is flat (index = 0), it means that the indirect effect is not related to the moderator. In our case, it is clear that the indirect effect depends on the moderator, and thus the mediation is moderated.

CONCLUSION

Much attention has been devoted to the study of the intent → behavior relationship in the social science literatures. However, relatively few researchers have considered intent as a moderated mediator. We propose and empirically test three alternative frameworks using movie box office revenues to estimate the relationships among advertising, intentions, and sales, including potential moderator and mediator effects. Our findings clearly support that intent serves as a moderated mediator between advertising and box office sales where prescreening liking is the moderator.

To the extent that movie releases resemble other new product introductions, this suggests that the role of intent in the adoption process deserves to be reexamined/expanded. In addition, researchers need to consider other moderator variables including prelaunch promotional efforts besides advertising, digital marketing, and social media prelaunch buzz. We acknowledge that the data have some limitations (e.g., the intent measure is dichotomous) which suggest future research opportunities. For example, the reported pattern of effects may not hold across other types of products and settings, something to consider for future investigation.

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The Dark Side of Consumers' Mobile Engagement in the Family Context

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INTRODUCTION

The proliferation of new technology has increased the opportunity for firms to engage with their consumers, leading to brand loyalty and enhancing firms' ability in product innovation (Brodie et al. 2013; Calder, Malthouse, and Schaedel 2009; Sawhney, Verona, and Prandelli 2005). The notion of consumer engagement through new technology has been attracting considerable attention from marketing scholars (Brodie et al. 2013; Calder and Malthouse 2015; de Almeida et al. 2018; Dolan et al. 2016; Hollebeek, Glynn, and Brodie 2014). Among this new technology, mobile devices have spawned various new ways for firms to interact with consumers (Pagani and Malacarne 2017; Thakur 2016; Viswanathan et al. 2017). Mobile devices combined with advanced technology features, such as internet and social media, allows firms to connect directly with consumers, with rich advertising content and valuable services (Aguirre et al. 2016; Calder and Malthouse 2015; Dolan et al. 2016; Viswanathan et al. 2017). Therefore, companies increasingly seek to engage with consumers through technology using toolssuch as advergames, gamification and branded mobile apps (Tuten and Ashley 2016; Viswanathan et al. 2017).

Previous work into consumer engagement and mobile technologies has primarily focused on efforts to increase consumer engagement for companies' benefits. For example, Thakur (2016) investigated the determinants of consumers' active engagement on social media and mobile in order to enhance brand loyalty. On the other hand, transformative consumer researchers have been primarily concerned with efforts to minimise deleterious consumer outcomes from excessive mobile engagement (David and Roberts 2017; Ward et al. 2017).

In recent years, there has been a growing awareness of parents' mobile device engagement and its effects on parent-child relationship and children behaviour (Hiniker et al. 2015; McDaniel and Radesky 2018; Radesky et al. 2014). Mobile devices provide endless opportunities for distraction (McDaniel and Radesky 2018) and time spent with these devices may displace and decrease parent-child interactions (Coyne et al. 2014). A survey of parents in the United States found parents were engaged with multiple mobile devices for more than nine hours a day, with most (82%) on personal activities (e.g., mobile game, social media) rather than work-related activities (Lauricella et al. 2016). Parents who are distracted by their mobile devices not only interact less with their children but are also more hostile to their children as their mobile engagement is interrupted (Radesky et al. 2014). Further, studies have found that parents' excessive mobile devices engagement is associated with behavioural problems in children (McDaniel and Radesky 2018). Parents have a role in guiding their child's mobile usage as well as ensuring their child safety, cognitive wellbeing, emotional wellbeing, and social behaviour. Thus, an understanding of parents' motivation to engage with mobile devices, their level of mobile engagement during parent-child interactions and the resulting impact on parent-child relationships and the wellbeing of children is a key factor in designing possible interventions and social marketing campaigns. This raises two questions: (1) Why do parents engage with their mobile devices during parent-child interactions? (2) How do parents' mobile engagement affect parent-child relationships and children's wellbeing? In addressing these questions, this research, following an extensive literature review, develops a model of consumer mobile engagement in the family and prosposes a series of prepositions for future research. Using a transformative consumer research lens, this study provides insights into possible intervention programs to decrease parents' (over)use of mobile devices in order to ultimately improve wellbeing outcones for consumers (parent and children alike) in the digital era.

THE SOCIO-TECHNOLOGICAL FRAMEWORK

In this study, we adopt the socio-technological framework by examining mobile engagement, mobile gratifications, narcissism personality and family communication pattern constructs with the aim of improving our understanding of how parents mobile devices engagement during parent-child interactions affect the parent-child relationship and the wellbeing of the child. Lanigan (2009) introduced the socio-technological framework to explain the complex relationship between family life and technology. According to the socio-technological framework, new technologies and the family can be understood when the characteristics of the technology, the individual traits of the user, family factors, and extrafamilial influences are taken into account. This framework is relevant when addressing the impact of parents' mobile devices, such as smartphone, tablets and laptop (as in this study) for several reasons. First, the characteristics of these mobile devices make them highly accessible and useful for parents to use in various circumstances. Most parents own these devices, specifically smartphone, and have access to the internet either within their home or in the public space (Pew Research 2018). Parents are also likely to use these mobile devices to satisfy their need gratifications such as picture taking, coordination, immediate access and sharing pictures (Hiniker et al. 2015). Also, extrafamilial influences, such as the workplace, tend to be supportive of these mobile technologies use (Lanigan 2009).

MOBILE ENGAGEMENT

Engagement refers to the state of being occupied, retained and intrinsically interested in something (Pagani and Mirabello 2011). Further, mobile engagement can be defined as consumer interaction with their devices, consisting of cognitive and affective consumer experience behaviour (Kim, Kim, and Wachter 2013; O'Brien and Toms 2008). Previous work in the human-computer interaction has shown that engagement correlates with measures of cognitive absorption (O'Brien and Lebow 2013; Oh, Bellur, and Sundar 2015; Wiebe et al. 2014).

Cognitive absorption developed by Agarwal and Karahanna (2000), represents consumers' experience when interacting with technology and represents the degree to which a person is aware of their surrounding environment while using technology (Saadé and Bahli 2005; Zhang, Li, and Sun 2006). Cognitive absorption encompasses affective and cognitive dimensions (Wakefield and Whitten 2006). The cognitive dimensions are control, curiosity, temporal dissociation, and focused immersion. Meanwhile, heightened enjoyment represents an affective aspect of cognitive absorption. Temporal dissociation is the state in which an individual is not aware of the passage of time while engaged with technology. Focused immersion is a state of complete engagement with the activity whereby individuals are oblivious to other demands. Heightened enjoyment captures the pleasurable aspects of interaction with technology. Control

represents the feeling of being in control while engaged in the activity. Finally, curiosity describes the aroused sensory and cognitive curiosity of the user during activity with technology. High cognitive absorption with technology has been closely related with problematic technology consumption (Bozoglan, Demirer, and Sahin 2014; Jia, Hartke, and Pearson 2007), with outcomes such as intense preoccupation with technology, an excessive amount of usage time, and poor impulse control. Cognitive absorption is a signal of a high level of engagement with the media; where the consumer is interacting with the media with almost complete focused attention on its content (Oh et al. 2015).

In this research, we focus on the impact of mobile engagement during parent-child interaction. Many parents are aware that their attention is absorbed by mobile devices use during parent-child interactions or while attending their child(ren) (e.g., at the playground) (Hiniker et al. 2015; Radesky et al. 2014). Absorption reflects the extent to which parents' engage with mobile devices rather than with their child(ren) (Radesky et al. 2014).

Previous research into parents' devices usages has employed frequency, duration and modality of device use to determine parents' mobile engagement during parent-child interactions (Hiniker et al. 2015; McDaniel and Radesky 2018; Radesky et al. 2014). However, frequency and time spent on mobile devices do not appropriately reflect consumer engagement with the focal object (Demangeot and Broderick 2016; Lee 2009). Thus, we propose the utilisation of cognitive absorption to help understand the level of parents' mobile devices engagement during parent-child interactions.

In addition, research in child development emphasises the importance of parent-child interactions to cognitive, social, and emotional wellbeing of children (Cole, Martin, and Dennis 2004; Dodici, Draper, and Peterson 2003; Sameroff 2009), such as building social interaction competence and establishing emotional regulation capability. Nowadays, parents may find less time to devote to their child(ren) because of their high engagement with mobile devices, leading to detrimental effects on child wellbeing. For example, a study in the UK found two-thirds of primary school students in the UK lacking in cognitive and social skills, such as writing, reading, and speaking (Farmer 2016). In the worst case, parents' mobile device is linked to children injuries (Palsson 2017).

Given that parents show attention absorption in their mobile devices during parent-child interactions, and may display harsh interactions with their child(ren) as their mobile engagement is interrupted (Hiniker et al. 2015; Kildare and Middlemiss 2017; Radesky et al. 2014), it is important to investigate how parents' level of engagement with their mobile devices affect the quality of parent-child relationships (in terms of the amount of time parents spend with their children and the amount of time communicating with their children) and the wellbeing of children. Thus, the following research propositions are suggested:

P1: *The higher parents' engagement with a mobile device during parent-child interactions, the lower quality of parent-child relationship.*

P2: *The higher parents' engagement with a mobile device during parent-child interactions, the lower cognitive(a), social (b) and emotional (c) wellbeing of children.*

MOBILE GRATIFICATIONS

Mobile technologies serve a wide variety of functions, providing the consumer with various experiences and encouraging them to continuously engage in activities that create value and satisfaction. Uses and gratification theory (UGT) has been applied widely to un-

derstand consumer motivations for media usage and access to satisfy their needs (Katz, Blumler, and Gurevitch 1973). Gratifications of mobile devices has been investigated by a number of prior studies. Mobility, relaxation, information seeking, work management and social connection were identified as the main gratifications of mobile devices, such as cellular phones, smartphones and tablets (Gerlich et al. 2015; Jin and Villegas 2008; Leung and Zhang 2016). Hiniker et al. (2015) reveal that picture taking, coordination and check the time were three main reasons for parents' mobile engagement when attending their child(ren) at playgrounds.

Further, prior research has established gratifications from mobile devices can be categorised into instrumental and ritualistic purposes (Hiniker et al. 2016; Joo and Sang 2013; Leung and Wei 2000; Leung and Zhang 2016; Rubin 1984). Instrumental uses of mobile devices are goal-oriented, such as work management (Hiniker et al. 2016; Leung and Zhang 2016). Meanwhile, ritualistic gratifications refer to habitual uses of mobile devices, such as browsing and social connection (Hiniker et al. 2016; Leung and Zhang 2016). Findings suggest that intensity of new technology use (e.g., social media and internet) is driven by different consumers' gratifications to use new technology (Alhabash et al. 2012; Chen, Chen, and Yang 2008; Mo and Leung 2015). Based on the above, the following propositions are suggested:

P4: *Instrumental gratifications will be positively associated with parents' engagement with a mobile device during parent-child interactions.*

P5: *Ritual gratifications will be positively associated with parents' engagement with a mobile device during parent-child interactions.*

NARCISSISTIC PERSONALITY

Narcissism is a personality trait reflecting a grandiose and inflated self-concept (Buffardi and Campbell 2008). Rosen et al. (2013) suggest that new technology increases narcissistic tendencies by encouraging vanity and self-promotion. Mobile consumers with higher levels of narcissism tend to have higher engagement with their smartphone and social media (Cassar et al. 2017; Fox et al. 2018; Hussain, Griffiths, and Sheffield 2017; Pearson and Hussain 2015). Ackerman et al. (2011) demonstrate that narcissism consists of three traits, including leadership or authority, grandiose exhibitionism and entitlement or exploitativeness. Further, studies found that the exhibitionism dimension of narcissism is a significant predictor of social networking service (SNS) usage behaviour and greater use of SNS, such as selfie-posting frequency (Cassar et al. 2017; Kedzior and Allen 2016; Singh, Farley, and Donahue 2018), time spent on SNS and status updates (Bergman et al. 2011; Carpenter 2012). Given that taking and sharing pictures is common for parents to engage with their mobile devices during parent-child interaction (Hiniker et al. 2015), it is logical to expect that exhibitionism narcissism can predict parents' mobile device engagement during parent-child interaction. Subsequently, the following research propositions are suggested:

P6: *Exhibitionism narcissism will be positively associated with parents' mobile engagement during parent-child interactions.*

P7: *Parents' SNS usage will positively moderate the effect of exhibitionism narcissism on parents' mobile device engagement during parent-child interactions.*

FAMILY COMMUNICATION PATTERN

Rudi et al. (2014) suggest that Koerner and Fitzpatrick's (2002) family communication pattern theory is useful in explaining technology use within the family and its outcome. Family communication patterns can be divided into conversation and conformity orientation (Koerner and Fitzpatrick 2002). In a conversation orientation family communication environment, all family members are encouraged to participate in the family interactions, such as expressing their opinion and taking part in family decisions. Meanwhile, conformity orientated family communication refers to the degree to which families emphasise the homogeneity of attitudes, values, and beliefs. High conversation families spend much time together, share thoughts and feelings, and make decision together as a family. Conversely, families on the high end of conformity orientation interact less frequently with one another, less frequently exchange private feelings, and not every family member can participate in family decisions.

Empirical evidence consistently shows that high conversation orientation family most likely have greater engagement with new technology (Ledbetter 2010; Valenzuela, Bachmann, and Aguilar 2016). However, the literature also shows the positive role of family communication pattern on family cohesion and media consumption (Cho and Cheon 2005; Gentile and Walsh 2002). High conversation orientated family environments tend to have high family connectedness through interactions positively related to decreased media engagement (e.g., television viewing). Taking these two opposing views into account, family communication patterns can be perceived as an environmental factor affecting the family's mobile device usage, and the following proposition is suggested:

P8: Higher conversation family communication pattern will be negatively associated with parents' mobile device engagement during parent-child interactions.

PROPOSITION OF THE CONCEPTUAL MODEL

Based on the theoretical review, this study proposes the following conceptual model of the dark side of consumers' mobile engagement in the family context (Figure 1).

CONCLUSION

The purpose of this paper was to propose a framework for examining the adverse effects of consumers' mobile engagement, specifically within the parent-child subsystem. The framework incorporates a set of constructs salient in the literature on new technology consumption and adopts socio-technological perspective. Future research may seek to employ further and develop the proposed framework on different settings of mobile engagement. This study contributes to the transformative consumer research by providing evidence of the relationship between parents' mobile engagement during parent-child interactions and the wellbeing of children. The results of this study also be of value to public policy makers, the education sector and social marketing initiatives in the area of children's wellbeing.

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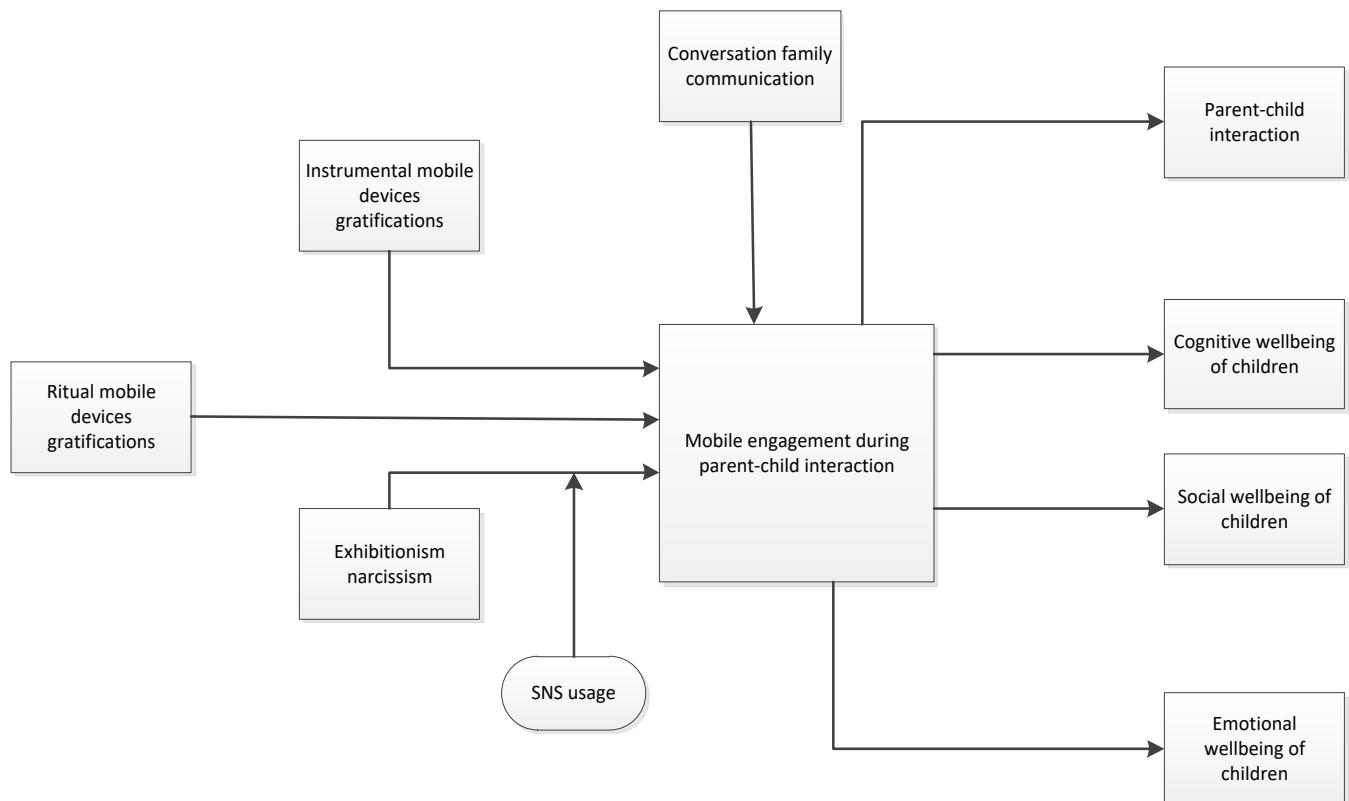
Figure 1: Model of The Dark Side of Consumers' Mobile Engagement in the Family

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Conceptualizing and Mapping Parent-Child Interactions
in the Intra-Family Decision-Making Process

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INTRODUCTION

The purpose of this paper is to explore and conceptualize the ongoing processes involved in family decision-making, specifically in relation to parent/child interactions. Earlier studies have not always distinguished between the influence and response strategies used respectively by children and/or by their parents. We propose the concept of interaction modes as a means for capturing these intra-family processes.

To date, the majority of family studies involving children have examined how children's purchase decisions are influenced by parents through consumer learning (McNeal 1987; Moschis and Churchill 1978; Szybillo, Sosanie, and Tenenbein 1977). Other studies have dealt with the type and extent of influence that children may exert on family decisions (Atkin, 1978; Belch, Belch, and Ceresino 1985; Darley and Lim 1986; Moschis and Mitchell 1986; Roberts, Wortzel, and Berkeley 1981). Research by Kerrane, Bettany and Kerrane (2015) explores how siblings act as agents of consumer socialization within the dynamics of family network. The major emphasis in earlier studies about children (Jenkins 1979; Szybillo and Sosanie 1977; Ward and Wackman 1972) has been on the *relative* influence of children on various aspects of family decisions, rather than the part played by children in the decision-making process. Research by Palan and Wilkes (1997) examined the relative influence of adolescents on their parents as well as parental responses. Their research was concerned with adolescents who have different cognitive abilities compared to younger children hence, their study served as the starting point for this research, and provided an opportunity for further conceptualization of the interaction processes.

This research shifts the focus away from the *relative* influence exerted by either the parent or the child on the decision, to examining the parent-child interaction itself. The aim of this research is to develop a conceptual framework of the interaction process between parents and their children. In this framework a distinction will be made between (1) influence strategies used by children in order to achieve a purchase request, (2) strategies used by children in response to parental denial of a child's purchase request, (3) parental initiated influence strategies used with children, and (4) parental strategies used in response to children's purchase influence attempts. This study thereby seeks to extend our understanding of consumer socialization by conceptualizing the interaction processes within families between parents and their children.

METHOD

This was a two-part study involving six-year-old children (i.e. children in the pre-operational stage (Piaget 1966)) and their mothers. Fifteen families were recruited in Greater Cairo, Egypt. Egypt is a typical developing country with an Arab Islamic context that has not been extensively researched before. With its own set of institutions, religious beliefs, norms, values and rituals, Egypt offers an important opportunity to explore family life within a Middle Eastern culture. Cairo was also chosen as it is largest city in Egypt in terms of population size (CAPMAS 1/1/2011).

A snowballing approach (Lindlof, 1995) was used to recruit families from the middle class socio-economic groups. Families with children who attended private national schools were approached. Some degree of diversity among the informants was achieved by choosing both working and non-working mothers; families from different residential areas; children from different schools; and families from different religious backgrounds. A gender balance was achieved with the ratio of seven boys to eight girls.

The starting point for the study was a projective technique of story building with six-year-old children. This story-building technique allowed these young children to talk about their experiences of interacting with their parents in requesting such things as food and toys. A series of cartoons were developed by the researcher. Children were encouraged to build a story from a given set of pictures. In some of the pictures they were able, with the help of the researcher, to fill in the empty speech bubbles and say what they thought the child in the story was saying to his mother or what his mother was telling him.

In the second part of the study, in depth interviews were held with the mothers. Each interview lasted between sixty and ninety minutes. The interview began by informing the participants that their anonymity would be preserved in writing up the findings; and in seeking their informed consent. An overview of the research purpose was offered to the informants who were then asked for their permission to tape record the interview. The interviewees were assured that no other party would listen to the tape recordings. Interviews began with an opening question and parents were then shown the story built by their children (the children's permission had been obtained to share their stories) and parents were asked to comment on their children's choice of incidents in the story and why they thought their children had made these choices from amongst the various scenarios which had been presented to them. Using the child's story helped with probing parents during the in depth interview. Interviews were then transcribed in full and analysed. A framework was derived from the themes identified from the interpretation of the data.

FINDINGS

The framework (Figure 1) conceptualizes the interaction process between parents and their children. As indicated before, the framework captures (1) influence strategies adopted by children in order to get hold of products they wanted from their parents, (2) parental initiated influence strategies used with children in the specified age bracket, (3) parental responses to their children's purchase influence attempts, and (4) children's responses to their parents' refusal of a purchase request.

These six-year-old children used various strategies in order to influence their parents to buy products for them. These influence strategies can be categorised as: Request, Persuasion, Emotional, Bargaining, Manoeuvring and Accommodative. The request category included simple requests, insisting, reminding and influencing. The persuasion category included repetitive requests, begging and peer influence. For instance, "he said he wanted a pencil case like the one of his friend [M9]". The emotional category encompassed crying, embarrassment and sweet talk which involved kisses, hugs, sweet verbal statements, and writing letters and cards. The bargaining category included money deals, other deals and limitations. Although most children at this age do not usually receive an allowance (and hence are not able to carry out successful money deals), some children had limited amounts of money from birthday gifts and feast days. Children sometimes also used other deals, for instance saying

Child influence / Parental Response

Child initiated influence strategy

Child influence
- Child only:
  - Request
- Shared (child/parent):
  - Bargaining
  - Emotional
  - Accommodative
  - Manoeuvring
  - Persuasion

Parental Response
- Parental only:
  - Expert
  - Legitimate
  - Procrastination
  - Directive
- Shared (parent/child):
  - Bargaining
  - Emotional
  - Accommodative
  - Manoeuvring

Parental initiated Influence Strategy

Parental influence
- Shared (parent/child):
  - Persuasion
  - Bargaining

Child response
- Child only:
  - Direct
- Shared (child/parent):
  - Bargaining
  - Emotional
  - Accommodative
  - Manoeuvring
  - Persuasion

Demographic characteristics, Era/cohort factors, Product type, Request situation

Note: The term 'shared' indicates either an influence or a response strategy that both children and parents employ, although not necessarily at the same time or jointly

Figure 1: Conceptualization of Influence and Response Strategies Within the Interaction Processes Between Children and Their Parents

that they would behave properly and excel academically in return for acquiring requested items. Children sometimes also use Limitation as a strategy, arguing about quantity and consumption time. The manoeuvring category included manipulation and referral. Manipulation referred to children's use of indirect ways to get hold of the products that they wanted to buy, "Sometimes in the store he picks things up and puts them in the cart. [M13]". In contrast, children use referral when they refer to grandparents and relatives in an attempt to guarantee the fulfilment of their requests. The final category was accommodative and included reasoning and convincing where children used a variety of reasons in order to influence their parents.

Parental initiated influence strategies included persuasion and bargaining. Persuasion included encouraging buying as well as taking children's opinion into account for products parents buy for their children. Common to these two strategies, and distinct from other strategies presented here, is the fact that these strategies were initiated by parents and were not evoked in response to their children's purchase influence attempts. It is important to note that the only bargaining strategy used by these parents, in an attempt to influence their children, was offering other deals through which parents proposed purchasing items believed to be important for their children in return for their children completing some important household chores or school work.

Parental responses to their children's purchase influence attempts included bargaining, procrastination, emotional, expert, legitimate, directive, accommodative and manoeuvring. Since some of these strategies have been outlined before, particular attention will be paid to legitimate, directive, procrastination, and expert strategies. Parents used four different response strategies based on their role as legitimate authorities including: positive response, negative response, reward and affordability. Similar to positive response, negative response depended largely on the type of product being requested.

"Especially in food, I take decisions even if she nags, I cannot accept everything [that she suggests] thing. As a householder I decide what to buy and what not to buy independent of their wants. For example, milk, 80% you decide the type of milk you'll choose and she accepts what I choose [M5]".

Affordability is one of the most commonly used response strategies by parents on the lines of: "Don't have enough money". Reward is the fourth and also one of the most widely used legitimate response strategies. Parents use their children's requests as a motivation for encouraging them to behave properly and excel academically. Reward value depended on the success achieved and ranged from an expensive toy to a child's simple request for a treat.

"When she does something good I must give her a reward on the same day, chocolate, kinder surprise, and these simple things. But if she receives the academic award at school, we must get her a toy. I believe everything according to its weight. Receiving an academic award for two consecutive months deserves buying a big thing; however, for sports exercise I buy her hand gel, Kinder surprise but not an expensive item. [M4]".

Using directive strategies parents, and largely mothers, refer children to their fathers in order to avoid a purchase request. Procrastination is only used by parents in response to children's purchase influence attempts and involves delaying a purchase request in anticipation of a suitable time, price or place. Parents mostly opted to use a procrastination strategy when they believed that the requested item was not important, urgent or vital: "I delay if it's not at a suitable time, and if you feel there is no urgency to buy it [M5]".

Expert strategies used by parents entailed socialization and included price socialization, budget socialization, quality socialization, place socialization, brand socialization, health socialization, usage/need socialization, behaviour socialization, and age/gender socialization. As noted by [M11],

"She is not aware of it being expensive or not. Lately I started to say this, to tell her no it is very expensive. Sometimes when I refuse to buy something she asks me, "Is it expensive?" …… I also tell her it does not make sense to pay so much for a fantasy item and she is convinced" [M11].

Also,

"I do not like Chips; they are very unhealthy and harmful to children. They contain preservatives. She knows this and I told her that it causes allergies and she is convinced because she already has an allergy from preservatives so when she eats Chips she really gets an allergy" [M11]. Finally, "I tell her that it is not good quality, it might tear easily so let us look for a similar thing but of a better quality so she is convinced" [M10].

Response strategies used by children in response to parental use of various influence strategies, and also as a subsequent response to their parental responses could be classified into: bargaining, persuasion, emotional, manoeuvring, accommodative and direct. Bargaining, emotional and manoeuvring were used by children as influence strategies. These were also used as a response to parents' refusal to buy a requested product. Persuasion includes pressure and nagging and accommodative strategies included resolution, convincing and negotiation. Parents noted that children of six years old do not easily accept a "No without a reason" response and typically ask why, they negotiate and request a convincing reason for their parents' refusal of their request. Finally, direct response strategies elicited in this research and used by children included acceptance and decline.

DISCUSSION

This study offers a detailed description of influence and response strategies as used by both parents and children within families. The

framework (Figure 1) represents a conceptualization of this interaction process between parents and children. Interaction refers to both parents' and children's use of various influence and response strategies in the context of family purchase decision making. Although the research by Palan and Wilkes (1997) has served as a starting point for this research, findings indicated that children and parents' use of various influence and response strategies differ from those used by and with adolescents. In addition, the study provides the first comprehensive identification and categorization of influence strategies used by children in an attempt to influence the outcome of family purchasing decisions (admittedly for a limited range of product categories that are specifically linked to children's purchasing interests) as well as influence strategies used by parents to influence their children's choice and use of various products. In addition, the study presents parental responses to influence strategies used by their children; as well as children's responses to their parents' use of various influence strategies. Children's subsequent responses to their parental responses are also covered, hence providing a picture of intra-family processes in decision-making. These findings then served as a basis for conceptualizing the interaction process between parents and their children. Hence, this research extends our understanding of how the classic models of consumer socialization work (Ward 1974; Moschis and Churchill 1978; Moschis and Moore, 1979), particularly in relation to information flows.

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Competitive Papers—Extended Abstracts

My Vegan Journey: How My New Morality Shaped My Relationship with My Family, Friends and the Market

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EXTENDED ABSTRACT

Moralized consumption is crucial to understand the rise of ethical consumerism against capitalism (Gopaldas 2014). As the commercialization of everyday life presents multiple consumption dilemmas there is a need to study the interplay between morality and consumption. (Wilk 2001; Arnould and Thompson 2005). Consumers are viewed to have enough agency to limit their consumption desires and to choose ethical consumption practices (Schor 1998).

Moralized consumption was studied from a macro level perspective identifying it drivers: political ideology (Henry 2010) and religion (Sandikci and Ger 2010), despite the presence of other motivations. Researchers also examined moralized consumption from a brand perspective. Consumers refuse to deal with certain brands to support local industries in times of crisis (Weinberger and Wallendorf 2012) or boycott brands with shady business practices (Simon 2011; Luedicke, Thompson and Giesler 2010). Finally, researchers looked at meso-level interaction between groups of different moral practices and how they negotiate their status (Saatcioglu and Ozanne 2013) draw symbolic boundaries (Lamont 1992) and deal with stigma (Crockett 2017). However, the main focus of these studies was mainly social class and race despite having other differentiators for morality.

Our paper brings a new dimension for the interpersonal aspect of morality and consumption. We show how people who divert from their primary socialization into new practices face social tensions that lead them to negotiate their interpersonal and market relations. We analyze our data using moral habitus (Bourdieu 1984; Ignatow 2009) and practice theory (Schatzki 2002). Ignatow (2009) built on Bourdieu's habitus as the enduring and subconscious patterns of thinking that is embodied to include morality and how people enact embodied emotions and intuitions from cultural repertoires through socialization. As the habitus is rather individualized and relies on the stability of dispositions (Trizzulla Garcia-Bardidia and Remy, 2016) we combine it with practice theory (Schatzki 2002). Practice theory asserts that social practices consist of three elements (Maciel and Wallendorf 2017): (1) understandings, or a tacit sense of what to say and do; (2) rules, "explicit formulations, percepts and instructions that enjoin, direct or remonstrate people to perform specific actions" (Schatzki 2002, p. 79); and (3) teleoaffectivities or modes of engagement, "which are a set of acceptable ends, orders, uses, and emotions—that governs the practice and embeds it into a context" (Arsel and Bean 2013, p. 901). The practices we focus on in this paper are eating, self-care and fashion.

Our paper investigates moralized consumption using veganism which "is the personal rejection of the commodity status of nonhuman animals, the notion that animals have only external value and the notion that animals have less moral value than do humans" (Kaplan 2012, p. 182). Our data consists of 15 depth interviews with current, lapsed and potential vegans,14 informal interviews at a vegan fest in a large North American city, and 3 informal interviews at a vegan restaurant. The data collection also involved participant observation in protests and sit-ins for animal activist groups and analysis of social media posts and comments that either shame vegans or non-vegans.

We find that our participants and their social network are guided by two opposing teleoaffectivities that operate on a quantum. The first teleoaffectivity focuses on maximizing the interests of humankind, and compassion towards fellow humans and certain animals over the others. The general understandings in this teleology includes meat as a nutritional necessity for survival and good health and hierarchy in the animal kingdom (dogs versus pigs). The rules include regulations on testing drugs and cosmetics on animals but not people. The opposing teleoaffectivity focuses on the preservation of all living things and compassion towards all creations. The general understandings include the necessity to protect all animals from abuse in slaughterhouses, entertainment industries, cosmetics and other industries. The rules include consuming products that are labelled as cruelty free.

Our findings show a three-stage process that individuals go through when they adopt new moral practices that differ from their primary socialization. At the destabilization stage individuals enter into boundary negotiations with members who don't share the same teleoaffective orientation. Later during the transformation stage, individuals build field dependent cultural capital to better negotiate their moral boundaries and reaffirm their new identity. Finally, at the reconfiguration of practice phase individuals re-think their relations with the marketplace and their social circle.

This paper adds to literature on moral consumption, symbolic boundaries negotiations and morality as a distinction tool. We also add to theories of practice to demonstrate the reconfiguration/re-alignment of practices following a new teleoaffectivity that conflicts with primary socialization.

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Let It Go: the Effect of Stress on Anonymous Self-Disclosure

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EXTENDED ABSTRACT

Due to the technological developments in the collection, storage, analysis, and usage of information, which altogether are referred to as "big data", information privacy is becoming an increasingly bigger concern for consumers, policy makers, and scholars alike (Acquisti, Brandimarte, & Loewenstein 2015). In 2016, TRUSTe/ National Cyber Security Alliance Consumer Privacy Index revealed that Americans were more worried about their data privacy than about losing their main source of income. However, despite consumers' self-reported concern about their information privacy, and despite the regulations and provisions that increase consumers' control over their personal data, it appears that consumers voluntarily provide personal, sensitive, and sometimes even incriminating information about themselves, especially on social media – a phenomenon termed "the privacy paradox" (Norberg, Horne, & Horne 2007).

The questions of when and why consumers reveal private information about themselves (i.e., self-disclose) are important not only within consumer research but also across several other domains, including law (e.g., fraud and data leakages), criminology (e.g., crime confession), insurance (e.g., risk calculations), healthcare (e.g., patients' information disclosure to doctors), psychology (e.g., trauma treatment). Therefore, understanding the conditions under which consumers voluntarily disclose sensitive, private, or unfavorable information about themselves is key for both theory and practice (Alter & Oppenheimer 2009). The current research argues that one important driver of consumers' self-disclosure is psychological stress, and that the effect of stress on self-disclosure can be eliminated by activating self-presentation goals.

Self-presentation denotes the process by which individuals attempt to control the impressions that others form of them (Schlenker 1980). Although the desire to present oneself positively is innate (Goffman 1959), self-presentation efforts are not constant, but vary across individuals and situations (Tyler 2012). When self-presentations are salient, individuals attempt to minimize the risk of portraying a suboptimal image (Leary & Kowalski 1990). Since self-disclosure entails a self-presentational component, the extent to which individuals are willing to self-disclose personal information varies according to the salience of their self-presentation goals (Tyler 2012). Thus, the more salient their self-presentation goals are, the more likely individuals are to conceal private information (Ellison, Heino, & Gibbs 2006). Drawing on this body of work, we propose that the activation of individuals' self-presentation efforts reduces the effect of stress on self-disclosure by encouraging individuals to protect their self-image. Hence, we hypothesize that when consumers are under high (vs. low) stress, their self-disclosure will increase, but only when their self-presentations motives are not salient. Results from three studies using different manipulations of stress and different research settings (i.e., field, laboratory, and online) lend support to these hypotheses.

In Study 1, using a naturalistic stress manipulation, we tested the basic prediction that stress amplifies individuals' tendency to divulge sensitive information about themselves. We ran a quasi-experimental field study that capitalized on a public oral exam with a one factor design (stress: high vs. low). Students were either part of a group that had to take the oral exam or part of a neutral group since the oral exam occured at two different moments. This enabled us to contrast two comparable groups with different levels of naturally occurring stress: high stress (driven by the oral exam) vs. low stress (no oral exam).

We measured self-disclosure by asking participants to answer a set of fifteen highly intrusive questions (John, Acquisti, and Loewenstein 2011). The questions were pretested on this particular graduate student population (e.g., "Have you every shoplifted?", "Have you ever used a fake ID?", "Have you ever smoked marijuana?"). Our dependent variable comprised the number of "Yes" responses. Results revealed the students who took the oral exam (high stress condition) answered a higher number of intrusive questions affirmatively than the students who did not take the oral exam (low stress condition) ($F(1, 36) = 4.32$, $p = .045$, $d = .67$). Therefore, Study 1 showed that a naturally occurring stressful situation significantly increased self-disclosure.

Study 2 employed a more controlled laboratory environment and a different stress manipulation. Students were invited to play The Mental Game, which was based on The Montreal Imaging Stress Task, an established protocol for inducing moderate psychological stress (Dedovic et al. 2005). The Mental Game consisted of a series of computerized mental arithmetic tasks, displayed on the computer screen. The arithmetic tasks were the same across the high and low stress conditions. However, participants in the high stress condition had to do it under time pressure (i.e., 10 seconds/question) and "correct" or "incorrect" feedback. Akin to Study 1, in the second part of the study, self-disclosure was measured with fifteen highly intrusive questions adapted from John et al. (2011).

Study 3 employed a 2 (stress: low vs. high) by 3 (prime: none vs. neutral vs. self-presentation) factorial experimental design. Akin to Study 2, the Mental Game was used to manipulate psychological stress. Self-presentation motives were primed using Tyler's (2012) scrambled sentence task. Participants were randomly assigned to one of the following three conditions: the no-priming condition (akin to Study 2), the impression prime condition, or the neutral prime condition. Participants in the neutral and impression prime conditions were provided with ten sets of scrambled five words that were either neutral or accordingly, impression-related. Following the self-disclosure measure, participants assessed their privacy concerns (2 items: "To what extent are you concerned with your online privacy?" and "How important is online privacy to you?" from 1 = "Not at all" to 5 = "Very much"; $\alpha = .77$, $M = 3.87$, SD = 0.87), and were debriefed. As predicted, results revealed that activating a self-presentation goal is a boundary condition for the positive effect of stress on disclosure such that priming the participants' self-presentations motives eliminated the effect of stress on self-disclosure. Study 3 also ruled out the potential role of privacy concerns.

Considered jointly, the present studies support our central hypothesis that stress enhances self-disclosure. In an ongoing study, we aim to shed light on the underlying processes. Overall, we augment the current understanding of stress and contribute to the disclosure literature by providing insights for organizations that value customer disclosure (i.e., insurance companies).

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Beyond Striving: On Maximizing, Choice Disfluency, and Regulatory Fit

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EXTENDED ABSTRACT

Situational shifts and individual differences in maximizing versus satisficing influence everyday consumer decisions. Whereas satisficers settle for "good enough," maximizers strive to "get the best," search more extensively, compare all relevant options, and rely more on compensatory decision rules (Anderson 2003; Bettman, Luce, and Payne 1998; Iyengar, Wells, and Schwartz 2006; Levav, Reinholtz, and Lin 2012; Ma and Roese 2014; Nardini and Sela 2019). However, aside from such behavioral patterns, relatively little is known about other psychological processes that differ between maximizers and satisficers.

This paper examines how maximizing and satisficing mindsets differ with respect to metacognition. We argue that under a maximizing versus satisficing mindset, choice disfluency (Novemsky et al. 2007) takes a different meaning and leads to opposite effects on an array of downstream behaviors, including choice deferral, charitable giving, and preference for action versus inaction. Specifically, we propose that encountering cognitive difficulty in choice leads maximizers to experience regulatory fit (Higgins 1997, 2006), namely, a sense of congruency between their decisional motivation and the way they carry out the decision. Conversely, satisficers experience regulatory fit when they experience choice fluency, or lack of difficulty. Regulatory fit, in turn, activates a generalized action motivation (Albarracin et al. 2008; Laran 2010). Consequently, choice disfluency increases action tendencies for maximizers but decreases them for satisficers.

People experience a sense of fit or "rightness" when their goal orientations match their goal pursuit strategies or processes (Lee, Keller, and Sternthal 2010). Regulatory fit increases motivational intensity and choice engagement (Aaker and Lee 2006; Avnet and Higgins 2006). Because maximizers are motivated to search hard for the best options, we hypothesize that choice disfluency informs them that they are in the right direction toward their goal, resulting in regulatory fit. Satisficers are motivated to minimize effort, so we hypothesize that for them, choice fluency evokes regulatory fit.

Based on this theorizing, we propose that choice disfluency activates a generalized action motivation for maximizers, whereas fluency activates an action motivation for satisficers. Consequently, choice disfluency makes maximizers more likely to commit to a choice option (i.e., defer less), donate money to charity, and play a game instead of merely watching it, whereas the opposite is true for satisficers. These divergent downstream effects of (dis)fluency on choice are mediated by subjective feelings of fit and activation of a general action goal.

Experiment 1A provides preliminary support for our proposition. We induced a maximizing vs. satisficing mindset using an essay-writing task from prior research (Ma and Roese 2014). Then, participants saw two Bluetooth speakers. We manipulated choice fluency vs. disfluency by asking them to think about how difficult it would be to generate two vs. ten reasons for choosing an option, respectively (adapted from Novemsky et al. 2007). Participants could then choose one of the options or defer the choice (pretested as representing action vs. inaction, respectively). A significant maximizing × disfluency interaction ($\chi^2_{(1)}$=16.35;β=-1.70;p=.000) supports our prediction: compared with fluency, disfluency decreased choice deferral for maximizers (disfluency=36.4%; fluency=57.9%;$\chi^2_{(1)}$=9.01,p=.003) but increased deferral for satisficers (disfluency=55.1%; fl

uency=35.6%;$\chi^2_{(1)}$=7.34,p=.007). Experiment 1B replicated this result using a measure of chronic maximizing vs. satisficing tendencies (Schwartz et al. 2002). Bolstering construct validity, disfluency increased chronic maximizers' tendency to choose while increasing chronic satisficers' tendency to defer (interaction $\chi^2_{(1)}$=32.99;β=-1.51;p=.000). Experiment 1C replicated this result ($\chi^2(1)$=23.74;β=-2.45;p=.000) using a different choice disfluency operationalization.

Experiment 2A tests a different action-oriented outcome: real charity donation (pretested as representing action, compared with not donating). After inducing maximizing vs. satisficing as in Experiment 1A, we showed participants a WWF ad about polar bear preservation. We asked them to generate two (fluent) vs. ten (disfluent) reasons for donating. Participants then had the option to donate their real money. Conceptually replicating the prior results (interaction F(1,179)=31.84;p=.000), disfluency made maximizers donate more ($M_{disfluency}$=14.86;$M_{fluency}$=8.15;F(1,179)=23.03,p=.000) whereas the opposite was true for satisficers ($M_{disfluency}$=7.73;$M_{fluency}$=12.24;F(1,179)=10.16,p=.002). Experiment 2B replicated this result (interaction F(1,160)=16.48;p=.000) using a perceptual disfluency manipulation from prior research (i.e., very low-contrast text).

Experiment 3 tests the mediating roles of regulatory fit and generalized action goal activation. We manipulated maximizing/satisficing and choice disfluency using the same manipulations from Experiment 1A. To further validate a goal activation mechanism, we used two consecutive choice tasks, each consisting of one action-consistent and one inaction-consistent alternative (pretest-based), to test for a goal rebound effect (Laran, Janiszewski, and Salerno 2019; Sela and Shiv 2009). One task was identical to the one used in Experiment 1A (choosing a Bluetooth speaker or deferring choice). The other task asked participants to choose between playing a game and merely watching it. Task order was counterbalanced. For each task, we coded responses as "action" (i.e., choose a speaker, play the game) or "inaction" (i.e., defer choice, watch the game). A goal rebound effect would predict an action-consistent choice on the first task to be followed by an inaction-consistent choice on the second task, and vice versa. To test our mediators, we measured the extent to which participants felt "right" while evaluating the options on the first task (adapted from Wadhwa and Zhang 2015) and the extent to which they felt a general drive to act (adapted from Jiang, Zhan, and Rucker 2014).

Replicating our prior results, disfluency (vs. fluency) increased action on the first task for maximizers but decreased action for satisficers, regardless of task type (interaction $\chi^2_{(1)}$=45.63;β=-2.25;p=.000). Consistent with a goal rebound effect, this reversed in the second choice task ($\chi^2_{(1)}$=49.08;β=2.50;p=.000). A moderated serial mediation analysis (Hayes 2018) (Index=-.44;95%CI[-.68,-.22]) reveals two indirect *disfluency→feeling-right→action-orientation→choice* effects, in opposite directions, consistent with our hypotheses for maximizers (β =-.20;95%CI[-.34,-.09]) and satisficers (β=.22;95%CI[.11,.37]). The negative coefficient for maximizers indicates that disfluency increased action-consistent choice on the first task, while the positive coefficient for satisficers indicates the opposite. These results provide strong support for our conceptualization.

Taken together, our findings show that choice disfluency evokes regulatory fit and activates a generalized action goal for maximizers, whereas fluency evokes fit and activates an action goal for satisficers. These findings shed new light on the psychological underpinnings of

maximizing and satisficing mindsets through a metacognition and goal pursuit perspective.

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Make My Brand Great Again: Exploring the Wisdom of Political Brand Personality

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EXTENDED ABSTRACT

National and global politics have now subsumed consumer culture. How you vote seems to have a direct relationship to how you shop, where you shop, and the products you purchase (Dumana and Ozgenb 2018; Ordabayeva and Fernandes 2018). Firms and brands are routinely categorized as either Democratic or Republican (Gelb and Sorescu 2018). Moreover, consumers appear fully aware of the politicization of brands and tend to punish or reward brands "on a permanent basis because of [their] perceived association to a particular political ideology" (Sandikci and Ekici 2009, p. 208). While this process of political consumerism has been studied for some time (Stolle, Hooghe, and Micheletti 2005), researchers have yet to investigate what makes a particular brand Democratic or Republican. What are the underlying dimensions and specific trait-image attributes of political brand personality? And, how important are these political brand personality characteristics in consumer decision making?

Accordingly, the current work has three main objectives. First, the work explores the issue of political brand personality (PBP) and uncovers the underlying dimensions behind consumer-perceived Democrat and Republican brands. Second, the work investigates the relative importance of PBP trait-attributes on consumer decision making. Third, the work serves to further validate research on political consumerism.

Brand personality is defined as the "set of human characteristics associated with a brand that serves a symbolic and self-expressive function through the use of a brand" (Aaker 1997, p. 347). People consume in ways that enhance or maintain their self-concepts in relationship to these brand personalities (Aaker 1997; Sung and Kim 2010). Consumers simultaneously avoid objects they consider to be incongruent with their existing self-concept. According to Wolter, Brach, Cronin, and Bonn (2016), "The danger of having a personality is, someone, inevitably won't like you. Brands with strong personalities attract consumers through consumer brand identification but alienate other consumers through consumer brand disidentification" (p. 785). When consumers judge brands according to political personality dimensions, their actions translate to acceptance or avoidance through political consumerism. Moreover, highly partisan consumers are likely to be more inclined to accept and reward (as well as avoid and punish) brands which they perceive as congruent (incongruent) with their strong party affiliation.

In order to assess the dimensions of PBP and understand how specific PBP traits influence consumer preferences and behaviors, we conducted two studies. The goal of Study 1 was to formalize trait-item generation, to purify items through exploratory factor analysis, and to assess validity. Two important results were derived from Study 1 ($n = 267$). First, the research team gained initial insight into the PBP traits deemed most important to consumers when choosing a brand. The top-three traits were Patriotic, Competent, Traditional. The bottom-three were Fiscally Responsible, Original, and Curious. Second, the 25 PBP traits were put through exploratory principal components factor analyses (using varimax rotations). Two factors emerged and appeared to represent a "Strength and Competence" dimension as well as a "Responsibility and Sincerity" dimension.

The purpose of Study 2 ($n = 217$) was to investigate the twelve PBP traits derived from Study 1 as they related to specific firms. Eight test firms were pre-identified as Democrat or Republican according to *fortune.com* (2016). Results uncovered common PBP traits amongst firms perceived as either Democrat (Starbucks, Google, Levi's, and Apple) or Republican (Wal-Mart, Chic-fil-A, Ford, and Hobby Lobby). The Democrat firms were perceived as more Modern, Socially Responsible, Sophisticated and Liberal. The PBP trait adjectives more generally associated with Republican firms were Traditional, Conservative, Rugged, and Fiscally Responsible. Additionally, Study 2 found evidence of political consumerism. Members of the three parties (Republicans, Democrats, and Independents) showed significant differences in terms of rewarding firms with similar political ideologies ($F = 10.14$, $p < .01$) and punishing firms with dissimilar ideologies ($F = 5.26$, $p < .01$). In both cases, Democrats appeared as the most likely to engage in political consumerism. That is, Democrats were more likely to reward brands that were thought to share the same political views as their own and to punish brands whose political views differed from theirs.

Further analysis revealed that age and educational level of the respondents did not contribute to political consumerism. However, we found that income level played an important role when it came to punishing certain brands ($F = 2.93$, $p < .05$). This result further validated the prior work of Lee, Motion, and Conroy (2009) showing that inertia (the cost of switching) is one of the primary factors contributing to avoiding a brand. They argued that this was due to the fact that the higher the income the more likely that consumers can afford to switch to a different brand regardless of the costs. Finally, female respondents reported higher levels of political consumerism than males in terms of the tendency to reward politically like-minded brands ($t = 3.0$, $p < .01$).

The results of Study 1 and Study 2 provide initial evidence for the presence of a political dimension of brand personality. PBP traits can be accurately measured and appear to be evaluating a "Strength and Competence" dimension as well as a "Responsibility and Sincerity" dimension. Brands are quite commonly, easily judged and categorized as either Democrat or Republican. Additionally, it appears that Democrat-perceived brands are more sophisticated, competent, exciting, and modern, while Republican brands are more likely to be considered traditional, conservative, rugged, and fiscally responsible. The current work also reveals that Democrat consumers are more likely to engage in political consumerism (punishing or rewarding brands as a form of political self-expression). Consumers want to buy things that are self-concept congruent, even in the realm of politics.

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The Crux of the Morality Halo:
The Interplay of Corporate Social Responsibility and Price Increases on Consumers' Perceived Price Fairness

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EXTENDED ABSTRACT

Consumers frequently evaluate and build expectations about a company's morality (Nebenzahl, Jaffe, and Kavak 2001). Two domains of morality that consumers consider in their buying decisions have been discussed particularly intensively. (1) First, consumers care about a firm's engagement in Corporate Social Responsibility (CSR) (Dawkins and Lewis 2003; Yoon, Gürhan-Canli, and Schwarz 2006). (2) Another domain in which morality considerations matter for consumers is the fairness of prices (Campbell 1999; Xia, Monroe, and Cox 2004). Given their prominence, this paper investigates if and how these two aspects of consumers' morality perceptions are related. While previous studies have investigated the CSR-related antecedents of perceived price fairness (Campbell 1999; Carvalho, Sen, Mota, and Lima 2010; Habel, Schons, Alavi, and Wieseke 2016), as well as the effects of price increases on perceived price fairness (Bolton, Warlop, and Alba 2003; Kahneman, Knetsch, and Thaler 1986; Urbany, Madden, and Dickson 1989; Vaidyanathan and Aggarwal 2003; Xia, Monroe, and Cox 2004), a comprehensive investigation of the effect of a firms' CSR engagement on perceived price fairness in price increase situations remains to be conducted. To address this gap, we analyze how consumers' perceptions of CSR influence perceived price fairness in price increase situations.

We base our theorizing on cue-utilization and cue-diagnosticity theory. We posit that in order to form expectations of a company's fairness in terms of price levels, consumers rely on CSR engagement as a cue of the company's morality. Thus, the firm's CSR engagement spills over to the domain of pricing and serves as an indicator of how fair price levels are expected to be. If consumers' expectations of a company's price fairness are enhanced by the CSR engagement of the company, a sudden price increase leads to a violation of these price fairness expectations. As a result, price fairness should be evaluated more negatively. Furthermore, we suggest that if consumers perceive a company's CSR engagement as intrinsically motivated, they will rate the diagnosticity of the CSR cue as high for judging the company's morality in terms of prices, and thereby, intrinsic CSR attributions increase expected price fairness compared to extrinsic CSR attributions.

To assess our hypotheses, we conduct three experiments. Study 1 is conducted in the context of furniture purchases, whereby 2,625 real customers of an international retailer are randomly allocated to two experimental conditions (i.e., price increase versus no price change of a product) in a between-subjects design. Using price increase as a predictor, perceived price fairness of the product as a dependent variable, and perceived intensity of the company's CSR as a moderator, we estimate a regression model. In line with our predictions, the negative effect of a price increase on perceived price fairness (b = -.62, p < .01) is significantly more pronounced if consumers perceive high levels of CSR engagement (b = -.12, p < .05).

Study 2 is conducted in the household electronics context, whereby the participants are asked to imagine that they are considering to purchase an electronic toothbrush. Three hundred-thirteen participants, acquired through an online consumer panel, are randomly allocated to experimental groups in a 2 (CSR engagement: low vs. high) × 2 (pricing: no price change vs. price increase) between-subject design. A path model using Mplus 7 shows that, in line with our expectations, CSR engagement significantly increases expected price fairness (b = 1.41, p < .01). Furthermore, the positive effect of a price increase on perceived violation of price fairness expectations is more pronounced for high as compared to low expected price fairness (b = .33, p < .01). Moreover, we inspect the indirect effects of the price increase treatment on perceived price fairness via perceived violation of price fairness expectations. In line with our expectations, this negative indirect effect is more pronounced for high levels of expected price fairness (b$_{indirect}$ = -.86, p < .01) and less pronounced for low levels of expected price fairness (b$_{indirect}$ = -.38, p < .01).

Finally, Study 3 is conducted in a fashion retailing context, with a sample of 454 participants recruited from Amazon Mechanical Turk. This study employs a 2 (CSR: low vs. high) × 2 (CSR attribution: extrinsic vs. intrinsic) × 4 (pricing: no price change vs. low price increase vs. medium price increase vs. high price increase) between-subjects design. In line with Study 2, a path analysis (Mplus 7), shows that perceived CSR significantly increases expected price fairness (b = 1.10, p < .01). Furthermore, intrinsic CSR attributions significantly increase expected price fairness (b = .46, p < .05), whereas the interactive effect of perceived CSR and CSR attribution on price fairness expectations is insignificant (b = -.03, p > .10). Furthermore, all price increase dummies (coded as 0 for no price increase) exert negative effects on perceived price fairness (b$_{low\ price\ increase}$ = -1.89, p < .01; b$_{medium\ price\ increase}$ = -2.04, p < .01; b$_{high\ price\ increase}$ = -2.36, p < .01). These effects are negatively moderated by expected price fairness for a medium price increase (b$_{medium\ price\ increase×expected\ price\ fairness}$ = -.16, p < .10) an for a high price increase (b$_{high\ price\ increase×expected\ price\ fairness}$ = -.21, p < .05), but not for a low price increase (b$_{low\ price\ increase×expected\ price\ fairness}$ = .13, p > .10).

Our results extend research on CSR and consumer outcomes by investigating the moderating role of CSR on the link between price increases and perceptions of price fairness. In this respect, we introduce the novel perspective to this research field that CSR raises consumers' expectations regarding firms' moral values against which consumers judge the actions of the firm. Second, we add to the literature stream on behavioral pricing that has mainly neglected the potentially adverse effects of CSR on consumers' price perceptions. From a managerial perspective, our findings imply that managers should attempt to prevent a firms' moral image to automatically manifest in elevated consumer price fairness expectations. They may succeed in decoupling moral image from price expectations by clarifying the distinction between the firm's social and market actions or by explaining to consumers the specific procedures of how the firm determines its prices.

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Harley Blow Dryers and Dove Men Body Wash:
The Masculine-American Stereotype and Its Effects on Gendered Marketing

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EXTENDED ABSTRACT

Many traditionally gender-focused brands are now targeting both genders in their advertising and product introductions (Sandhu, 2017), a practice known as *brand gender bending*. Notwithstanding these trends, past research suggests a gender-based asymmetry when brands cross the gender divide. While women tend to accept masculine-identified brands, men are not as reciprocal for feminine brands (Morris & Cundiff, 1971). What drives this asymmetry? What are the factors that contribute to women's acceptance of masculine brands? How can managers of feminine brands be more successful when introducing new products targeting men? The present research addresses these important questions by highlighting a masculine-American stereotype in the U.S. society, which drives identity-driven effects on women's relationships with masculine brands.

This stereotype is rooted in the notion that most societies, including the U.S., are androcentric. That is, they value masculinity over femininity (Kramer & Beutel, 2015). Furthermore, in the U.S., superior groups tend to be seen as the prototype compared to inferior ones (e.g., Whites vs. minority groups, Devos & Banaji, 2005). To the extent that men have more influence than women in shaping which culturally prominent objects are more widely disseminated (McCracken, 1986), we hypothesize that symbols of the male-dominant culture (e.g., masculine brands) should be more likely to be perceived as American symbols. Furthermore, we propose that when the American identity, which both American men and women share, is salient, women would identify more with masculine brands that are also widely perceived to be symbolic of American culture. Based on this cultural stereotype, we also identify ways to strengthen the feminine-American association for boosting male consumers' acceptance of feminine brands. This would be possible by strengthening these brands' associations with American culture (i.e., strengthening the feminine-American association). Doing so should heighten perceptions about the masculinity of the product due to the masculinity attached to an American brand/product.

Study 1 demonstrated the masculine–American stereotype in implicit (sample 1, N=86) and explicit associations (sample 2, N=174), following procedures used in past research on cultural stereotypes (Devos & Banaji, 2005). This study also assessed the stereotype in shared perceptions and cultural discourse of brands. With the first sample, we determined that male concepts (e.g., forming male vs. female names in a word jumble) were more salient upon exposure to American (vs. foreign) symbols. With the second sample, we showed that explicit perceptions about the masculine–American stereotype are evident in the sharedness of a lay definition of American identity in terms of the male identity (e.g., the extent to which men (women) are American,"). Finally, the masculine-American stereotype was evident using a large set of brands (N=90) and a large consumer set (N=644), showing a significant correlation between the brands' symbolism of American culture (Torelli, Keh, & Chiu, 2010) and that of masculine culture (r=.59, p<.001), but not of feminine culture (r=-.22, ns). This study also showed that brands with strong male symbolism (r=.85, p < .001), but not those with strong female symbolism (r=.07, ns), were more likely to be brands that would be mentioned together with explicit references to "American (cultural) icons" in business articles and webpages.

Studies 2a and 2b demonstrate that American women with a heightened sense of their American identity favor masculine brands that are perceived to be more symbolic of American identity. This is because enhancing women's identification with the common in-group identity (i.e., heightening American pride) will in turn increase the salience of the positive aspects of the American identity and its associated symbols (i.e., masculine brands associated with American identity). In Study 2a (N=171), we used a 3 (type of brands: masculine, feminine, or gender-neutral) × 3 (brand replicates) × 2 (identity salience: American identity salient/control) mixed design. Half of the participants in each gender group ('American identity salient' condition) read a story highlighting the accomplishments of Americans, and the remaining half (control condition) read a neutral story. Next, participants evaluated the nine brands. American women evaluated the masculine brands more favorably in the American identity salient (vs. control) condition (p<.01). Study 2b (N=201) replicated these findings for evaluations of brand extensions (e.g., Harley-Davidson Blow Dryer).

In Study 3, 238 American women were divided in three groups, and read an essay highlighting women's contributions toward American society (high-identification condition), an essay on gender inequalities in the U.S. (e.g., low-identification condition), or a neutral passage. After that they evaluated a promotional activity (i.e., receive money to promote the brand) by either a male-symbolic brand (Harley-Davidson) or a gender-neutral brand (New Balance). Participants in the high-identification condition were willing to receive less money for promoting the Harley-Davidson brand (M=7.44) than those in the control condition (M=10.24), who in turn requested less money than women in the low identification condition (M=10.93, linear contrast estimate = 2.46, p<.001). These effects were absent for New Balance.

Study 4 showed that women's support for for American football, a masculine and American sport was stronger in U.S. regions where staunch allegiance to the country and perceptions of pride in being American and in American symbols (e.g., flag/anthem) are widely shared.

Studies 5a and 5b assessed the conditions under which men accept products introduced by feminine brands. In Study 5a, 99 American men evaluated a commercial for a feminine-branded product (Dove men+care body wash) and a gender-neutral product (Tylenol back pain). They also rated the masculinity of the product and the Americanness of women. Perceptions of masculinity mediated the positive effect of beliefs about the Americanness of women on product favorability (indirect effect=.075, 95% CI [.002, .201]). This effect was absent for the gender-neutral product. In Study 5b, 97 American men were divided in two groups and presented with a new men's underwear product by Victoria's Secret. In the "Victoria's Secret–America" condition, the information emphasized the Americanness of Victoria's Secret, whereas the control condition made no such reference. Results showed that ratings about the masculinity of the product mediated the more favorable evaluation of the new product

in the "Victoria's Secret–America" (vs. control) condition (indirect effect=-.201, 95%CI [-.401, -.033]).

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The Path from Innovative Marketing Medium to Value-Creation:
An Experience in Virtual Reality

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EXTENDED ABSTRACT

We aim to understand how innovative marketing mediums influence value-creation. We explore this question in the context of virtual reality tours in the real estate industry. As a result, we propose a process model of how consumers' use of innovative marketing mediums co-create value.

The internet allows consumers to interact with marketing in ever-changing ways. Globally, more than 4-billion people access the internet (Kemp 2018). Access via smartphones is now more than half of all internet connections, and nearly 3-billion consumers use social media (eMarketer 2018). Innovative marketing mediums (IMM), such as virtual reality or augmented reality today, offer novel ways for consumers in digitally-enabled environments to make informed consumption decisions and create value. Value can influence consumer loyalty (Parasuraman and Grewal 2000), and value-creation produces additional benefits beyond the exchange (Grönroos and Voima 2013; Vargo and Lusch 2004, 2016)the exchange of information has become more important (because this is part of relationships. As such, understanding consumers' value-creation process when using IMMs can inform why consumers engage with marketing mediums.

Conceptually it is acknowledged that innovative technology influences perceptions of value (Grewal et al. 2003; Parasuraman and Grewal 2000). Previous empirical analysis exploring the process between innovative technology and value is scant but indicates this relationship exists (Barrutia and Gilsanz 2013; Kim and Niehm 2009). We seek to answer the call for how innovation enables value-creation, as this process remains unclear (Flint 2006). This research informs the process of how consumers' use of a specific IMM, specifically virtual reality (VR) tours, influences value-creation.

The purpose of this study is to propose an empirically grounded process model of how IMMs influence value-creation. An inductive, qualitative research design is adopted, and data collection consists of semi-structured interviews, archival documents, and online comments. Service-dominant (S-D) logic (Lusch and Vargo 2006; Vargo and Lusch 2004, 2008, 2016)2004 is used to interpret how this process occurs. The data reveals that the perceived innovativeness of the IMM, bolstered by user control and realism, facilitate a co-created marketing experience. This experience facilitates four benefits that lead to an increase in consumers' purchase intentions, resulting in co-created *value-in-use*. Additionally, the experience fosters consumers' desire to share the content for the goal of receiving an appraisal of their social identity. This deployment of social resources is a reflection of a lesser-discussed component of *value-in-use*, that which we propose as a *value-to-identity*.

THEORY

Value and Service-Dominant Logic

Value is commonly "ill-defined and elusive" (Grönroos and Voima 2013, p. 134). Traditionally, value is perceived as being created and driven by the firm (Grönroos and Voima 2013; Vargo and Lusch 2004), yet the determination of value has shifted to a focus toward involving the consumer. This is evident in the interpretation that value is driven by consumers' perceptions. In this conceptualization, value is frequently defined as "consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml 1988, p. 14). However, this conceptualization still focuses on the firm creating value as a proposition to consumers with the goal of improving utility.

Service-dominant (S-D) logic facilitates the interpretation of the consumers' role in the value-creation process. Value-chain literature inherently includes consumers in the value-creation process by way of perceptions. Nonetheless, the seminal work by Vargo and Lusch (2004) continues the shift toward the active role that the consumer plays in value-creation (Vargo, Lusch, and Morgan 2006). Consumers are not and never were passive actors in marketing exchange (Vargo and Lusch 2008, 2016)fa- cilitated by an active community of scholars throughout the world. Along its evolutionary path, there has been increased recognition of the need for a crisper and more precise delin- eation of the foundational premises and specification of the axioms of S-D logic. It also has become apparent that a lim- itation of the current foundational premises/axioms is the ab- sence of a clearly articulated specification of the mechanisms of (often massive-scale. At the heart of S-D logic, multiple actors participate, leveraging operant and operand resources in value-creation, or *value-in-use*. *Value-in-use* is defined as the value determined by the consumer in an exchange (Cova, Dalli, and Zwick 2011)ownership, consumption, and production need to be redefined, and political ideas of the relationship between the social and the economic require addressing in the age of cognitive, or as we call it, collaborative capitalism. In addition to these broad theoretical challenges, the contributions in this issue zoom in on what arguably constitutes the central question for our specific field: What are the implications of a collaborative capitalism for understanding the place of marketing techniques in value creation? As with all good scholarship, the essays in this issue do not provide definitive answers but instead lead to a more elaborate set of questions. By doing so, they broaden the critical engagement with value co-creation in marketing. \u00a9 The Author(s.

When conceptualizing value-creation as *value-in-use,* the process shifts the view of value to focusing on the "ongoing process" (Grönroos and Voima 2013, p. 135). The benefit moves from a utility gain by firms and consumers, to arguably a larger gain of "mutual betterment" (Grönroos and Voima 2013; Karpen, Bove, and Lukas 2012, p. 22). Ultimately, this shift to value-creation as a process of the experience drives a broader understanding of consumers' value (Cova, Dalli, and Zwick 2011; Helkkula, Kelleher, and Pihlström 2012)ownership, consumption, and production need to be redefined, and political ideas of the relationship between the social and the economic require addressing in the age of cognitive, or as we call it, collaborative capitalism. In addition to these broad theoretical challenges, the contributions in this issue zoom in on what arguably constitutes the central question for our specific field: What are the implications of a collaborative capitalism for understanding the place of marketing techniques in value creation? As with all good scholarship, the essays in this issue do not provide definitive answers but instead lead to a more elaborate set of questions. By doing so, they broaden the critical engagement with value co-creation in marketing. \u00a9 The Author(s, leading to numerous benefits beyond utility (Flint 2006; Hsieh and Chang 2016).

Innovative Marketing Mediums

Innovation is comprised of ideas, objects, or processes perceived as new in the marketplace (Flint 2006; Schumpeter 1934). Furthermore, innovative marketing is understood as developing something novel with products, services, or technology to create market demand, whether a new product or in marketing (O'Dwyer, Gilmore, and Carson 2009). Extending O'Dwyer et al.'s (2009) explication, we define *innovative marketing mediums* (IMMs) as new or novel decision-aids used to create market demand. We operationalize IMMs within digital marketing environments. Empirical research in innovative marketing is of pertinent interest but to date has been highly fragmented (Lamberton and Stephen 2016). The relationship between innovation and value-creation exists abstractly. Co-creation has been known to facilitate innovation (Abendroth and Pels 2017; Hsieh and Chang 2016; Lusch and Nambisan 2015) and innovative communication technology facilitates the co-creation of value (Breidbach and Maglio 2016; Arvidsson and Caliandro 2015; Schau, Muñiz, and Arnould 2009). However, the question remains: *How do IMMs influence value-creation?*

METHOD

We use an inductive qualitative methodology for this study as there is a lack of an established theoretical framework that describes the process of how IMMs influence value (Deshpande 1983). We apply a grounded theory approach for data collection and analysis (Corbin and Strauss 1990; Glaser and Strauss 1967). To expand our understanding of how IMMs influence value-creation, we explore this question further in the context of virtual reality (VR) tours in the real estate industry. VR can provide insights into future marketing mediums. Industry researchers believe that VR is a disruptive technology and has growth opportunity in the future (Goldman Sachs 2016), and VR-tours are currently used in multiple industries. Furthermore, real estate experts argue that VR-tours are an innovation in the industry (Abbasi 2017; Athwal 2017). Real estate VR-tours can be implemented by the buyers' or sellers' agents and allow users to interact with the presented content in numerous devices, including goggles, smartphones, tablets, and personal computers. Looking at our inquiry through the lens of the real estate industry allows for a unique exploration of both tangible and intangible service exchange, by way of buyers and sellers. Our empirical data originates from 27 in-depth interviews with consumers and those can speak to consumers' interaction with the tool. Additionally, archival documents, online video, and comments were included in analysis. Data analysis and literature triangulation was continuous and driven by constant comparison (Glaser and Strauss 1967; Strauss and Corbin 1998). See table 1 for data codes and figure 1 for the proposed model. Member checks were engaged and confirmed the emerging themes and model.

FINDINGS

Marketing Experience

When informants discuss the consumer experience with VR-tours, they communicate three unique facets that influence value-creation. Overwhelmingly, informants communicate how "wowed" they are by the experience, stating they have never seen anything like the VR-tours. Whereas most informants identify VR-tours as novel and new, consumers with significant gaming, or similarly-related expertise, do not. As a result, this lower perception of *innovativeness* ultimately weakens the value co-creation process for these consumers. Additionally, consumers frequently express a perception of verisimilitude, or *realism,* with this tool. VR-tours offer a realistic sensation of being physically present in a virtual space, or telepresence

(Klein 2003; Steuer 1992; Yim, Chu, and Sauer 2017). Moreover, VR-tours offer a reflection of reality not common in an industry ridden with deceptive advertising.

You just feel like you're there. You just teleported yourself there, and you're experiencing it in real time. And I think it's exciting because you just feel like you're part of it and you can really get a better idea of the house and what it's gonna feel like. (Janet, buyer/seller)[1]

VR-tours also foster *user control*, enabling a co-created experience. The ability to 'turn left and right' is a significant improvement over other commonly-used mediums in real estate. Additionally, the ability to 'visit' time and time again offers consumers the ability to control their experience and offers needed privacy. As consumers have more control over their experience, consumers' engagement and perceptions of brand equity increase (Schau, Muñiz, and Arnould 2009), driving value-in-experience (Minkiewicz, Evans, and Bridson 2014; Prahalad and Ramaswamy 2004).

Benefits

While the VR-tour experience is agent-facilitated, the consumers' active role enables four identified consumer benefits achieved through the experience. First, the experience influences consumers' commonly emotional journey by offering the added *convenience* of visiting fewer homes in-person and having fewer visits by more "qualified" prospective buyers. The facets of realism and user control allow buyers to view homes virtually and quickly eliminate homes they are not interested in viewing:

My sellers were inconvenienced less. They didn't have to leave the property as much because the buyers didn't have to come over to measure if a couch is going to fit in a room. Outside of inspection, the buyers could view it virtually 24 hours a day. So, it saved everybody a little headache. (Charley, agent/broker)

Second, this tool shifts consumers' *quality perceptions*. VR-tours elevate the perception of the homes' quality as well as agents' tech-savviness and "professionalism". While some marketing tactics can signal low quality in the agents' ability, such as "sideways pictures" and low-resolution pictures taken with their smartphones, VR-tours signal agents' professionalism.

Third, the experience also garners *trust* in an environment typically occupied with confusion. This drives consumers to be more confident in purchasing their home, leading some to purchase their homes "sight unseen". Agents commonly mention the importance of affinity relationships with their clients, and VR-tours creates an additional element to build affinity relationships. While realism within VR-tours create further *trust* in what buyers are looking at, agents offering VR-tours to consumers increase affinity, a way to capture *trust* in an agent as well.

Lastly, the experience enables emotive attachment, or *bonding,* to the home or agent. Consumers mention "loving" the home even prior to seeing it physically, shifting the *bonding* process earlier. There is also opportunity for the *bond* to not only shift earlier but to also happen completely within the digital environment:

So when I looked in, I didn't get the "oh my gosh, it's perfect" feeling because I already kind of knew that from the [VR-tours]… I just wanted to walk in and get that in-person feeling that it is just like the [VR-tour]. (Laura, buyer/seller)

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1 Note that all informant names are pseudonyms and quotes have been cleaned for clarity

Some VR-tours permit consumers a feeling of realism that the agent is there with them during the tour, fostering a deeper relationship with the agent. Some even identify their agent as a "friend" and feel like they really know the agent, despite some never having any physical interaction.

Value-in-Use

Consumers' enhanced quality perceptions of, trust in, convenience of, and bond with the home or agent result in intentions to purchase. These include, according to our informants, decreased days on the market, increased purchase price, buyers willing to buy "sight unseen," and securing clients. These intentions are products of the operant (e.g., monetary) and operand (e.g., time) resources that consumers engage, reflecting *value-in-use*. However, this journey also reveals a unique value to the consumers' social identity. Nearly all consumers state they share the content with family and friends. Much to the dismay of the agents, the purpose of this is not to help sell the home. Consumers share to gain a "secondary confirmation source" and to see how they fit into their social circle. The home is an important reflection of or extension of the self (Belk 1988), and VR-tours offer consumers pre-packaged content to share with others. The sharing of this content provides a way for consumers to show off their future or desired home, as well as their own innovativeness in using VR-tours.

Consumers share the VR-tours in search of a trustworthy source for confirmation or to show how they fit in their social circle*:*

The primary value in that product is so that buyers can disseminate to their friends. And sellers can disseminate to their friends and as more of a where they fit in their 200-person tribe. (Charlie, agent/ broker)

Consumers readily use symbolic objects or actions to signal a social identity or role (Kleine, Kleine, and Laverie 2006; Solomon and Assael 1987). Symbolic interactionist identity theory recognizes the use of these symbols as vehicles for gaining appraisal for internal self-appraisal and external social-appraisal (Kleine et al. 2006; Burke and Reitzes 1981; Stryker 1980; Laverie et al. 2002). Ultimately, consumers engage their operant resources (e.g., social relationships) for reflected appraisal. This tacit reinforcement of social identity reveals a less-discussed component of *value-in-use*, that which we propose as a *value-to-identity*.

DISCUSSION

This paper proposes a process model of how consumers' use of IMMs to co-create value. This model is grounded in empirical data within the context of VR-tours in the real estate industry. Value is not created by the firm but can be facilitated (Vargo and Lusch 2008). This study fills a gap in our understanding of how IMMs influence value-creation. We identify that IMMs facilitate *value-in-use* by way of the facets of innovativeness, user control, and realism. These facets of the IMM studied create added convenience in the search process, improve quality perceptions, increase trust in the agent and themselves, and shifts the bonding process earlier. Firms supplying IMMs can provide the opportunity for co-created experiences leading to value-creation.

This research makes two important theoretical contributions. First, this study not only empirically contributes to innovation-value-chain theory but also to S-D logic literature. The marketing experience offered by IMMs creates an empowering, personalized process (Cova, Dalli, and Zwick 2011)ownership, consumption, and production need to be redefined, and political ideas of the relationship between the social and the economic require addressing in the

age of cognitive, or as we call it, collaborative capitalism. In addition to these broad theoretical challenges, the contributions in this issue zoom in on what arguably constitutes the central question for our specific field: What are the implications of a collaborative capitalism for understanding the place of marketing techniques in value creation? As with all good scholarship, the essays in this issue do not provide definitive answers but instead lead to a more elaborate set of questions. By doing so, they broaden the critical engagement with value co-creation in marketing. \u00a9 The Author(s. Understanding the participatory nature, driven by user control, of the IMM experience enhances our understanding of the benefits that enable *value-in-use*. Our findings encapsulate innovation-value-chain theory (Lusch, Vargo, and O'Brien 2007) and push beyond to empirically reveal the non-linear nature of value-creation (Grönroos and Voima 2013; Helkkula, Kelleher, and Pihlström 2012).

Second, the study offers an empirically grounded model of how consumers' experience is active and participatory in the usage of IMMs to leads to consumers' use of social resources in value-creation. The data reveals that IMM content is used as a semiotic representation of consumers' social identity. This representation is shared for reflected appraisal benefits to gain social acceptance. While conceptualizations exist that point to consumers' usage of their social relations as operant resources for co-creation (Arnould, Price, and Malshe 2006; Flint 2006; Grönroos and Voima 2013), this paper empirically recognizes this process. Understanding this balance of emotionality-rationality-sociality widens our understanding of the powerful impact of IMMs.

This study is limited by the context constraints of researching one IMM and one industry. While these themes are apparent in a context of VR-tours, this understanding may be transferable to other marketing mediums such as augmented-reality, digital lookbooks, and interactive infographics. Future research can investigate other IMMs and industries to understand additional facets of IMMs and benefits that lead to value-creation. Similarly, future research can explore how IMMs are used to foster consumers' desire for appraisal in their social identity. It would be interesting to understand how sharing IMMs influence consumers' loyalty to a firm in addition to consumers' well-being (Williams and Aitken 2011)2007.

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Can Downward Counterfactual Thinking Increase Consumers' Goal Persistence?

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EXTENDED ABSTRACT

Consumers often encounter hurdles during goal pursuit. When experiencing difficulty meeting a goal, previous research suggests that individuals can benefit from generating upward counterfactual thoughts about what they could have done differently ("it could have been better") because the content they generate can prescribe corrective strategies for future self-improvement (Epstude and Roese 2008; Kray, Galinsky, and Markman 2009; Roese 1997; Smallman 2013; Smallman and Roese 2009) and because the negative affect evoked signals that goal progress is insufficient which can spur the investment of additional effort (Epstude and Roese 2008; Markman, McMullen, and Elizaga 2008; McCrea 2008; Myers and McCrea 2008). Alternatively, downward counterfactual thoughts ("it could have been worse") are believed to hold limited motivational value, as they do not specify corrective actions for self-improvement and because the positive affect they elicit can be taken as evidence of satisfactory goal progress (Roese 1994; Roese 1997; Zeelenberg 1999). But can downward counterfactual thinking increase consumers' goal persistence?

Given the function of negative affect as a motivator for those with a goal progress mindset, existing research has focused on the motivating role of upward (compared to downward) counterfactuals as the default source of negative affect. However, more recently, Fishbach and colleagues theorize that instead of focusing on goal progress, people may interpret affect stemming from goal-related feedback, in terms of their degree of *goal commitment* (Fishbach and Dhar 2005; Fishbach, Dhar, and Zhang 2006; Fishbach, Eyal, and Finkelstein 2010). Specifically, strong goal commitment occurs when the goal is perceived as valuable and there is a positive expectancy that the goal can be achieved. Critically, an increase in goal commitment is a key driver of goal persistence.

Building on these ideas, we propose that a valuable source of goal commitment feedback may stem from the positive affect evoked by downward counterfactual thoughts generated in response to a successfully avoided worse outcome. For example, the positive feelings experienced by a Weight Watchers consumer who loses 5lbs of a 10lb weight-loss goal and generates the downward counterfactual thought "*At least I exercised every other day, otherwise I might not have lost any weight*", can provide evidence of the consumer's increased valuation of doing well (i.e. goal value: "I care about losing weight") and raise the consumer's confidence in the prospect of achieving greater future weight-loss success (i.e. goal expectancy; "I have confidence in my ability to lose more weight going forward").

Importantly, because generating downward counterfactuals represents a controlled, deliberate and effortful process (White and Lehman 2005), we argue that downward counterfactual thinking should be limited to consumers who seek, or situational contexts which demand consumers' reliance on, information inferring their extent of goal commitment (as opposed to goal progress). Given differences in goal lens (commitment versus progress), we propose chronic and situational regulatory orientation (Higgins 1997, 1998) as one such important determinant that will influence the tendency to strategically use downward counterfactual thinking alongside semantically informative upward counterfactuals to bolster motivation.

In particular, evidence suggests a link between a global focus and the tendency to interpret goal actions with a goal commitment lens (Fishbach et al. 2006; Fishbach et al. 2010). This lens is acti-

vated because when a goal appears far from reach, it is more difficult to gain a sense of the extent of goal progress made than it is to gain a sense of the importance and expectancy of attaining the goal. In line with this reasoning, we suggest that while upward counterfactuals provide promotion-focused consumers' the necessary information to identify the corrective actions required to facilitate self-improvement via their content, they alone are not sufficient. Given their global processing mode, promotion-oriented consumers interpret goal information as a signal of their commitment to pursuing these identified better outcomes. Therefore, downward counterfactuals will provide a motivational boost from the positive affect they evoke because it can be taken as evidence of their commitment to pursuing the goal.

On the contrary, the local focus and vigilance of prevention-oriented consumers, means that they should be more attuned to information signaling the extent of goal progress. Accordingly, and consistent with past research highlighting the motivational benefits of upward counterfactuals, we propose that prevention-oriented consumers can gain both content-specific *and* affective benefits from upward counterfactuals alone. For example, in addition to garnering strategically informative knowledge on how to improve from the semantic content of upward counterfactuals, the negative affect associated with the comparison of a better alternative to reality, will offer evidence of insufficient goal progress and signify that the investment of additional effort is required. Given a goal progress lens, prevention-oriented consumers should therefore be less likely to motivationally benefit from the provision of downward counterfactuals.

We investigate our theorizing across three studies. In Study 1, we examine chronic promotion and prevention consumers' tendency to spontaneously generate upward and/or downward counterfactuals in preparation for a future game of Blackjack. As hypothesized, chronic promotion and prevention consumers both generate upward counterfactual thoughts. In addition, chronic promotion (versus prevention) consumers are more likely to generate downward counterfactual thoughts. In Study 2, we activate a momentary regulatory orientation and manipulate exposure to counterfactual statements to examine the extent of reliance on downward counterfactual thoughts for motivation using a behavioral measure of subsequent task persistence. We find increased subsequent persistence for promotion-oriented consumers when downward counterfactual thoughts are provided alongside upward counterfactuals. In contrast, prevention-oriented consumers do not benefit motivationally from the provision of downward counterfactual thoughts. In Study 3, we seek to isolate the content-specific and affective motivational benefits of upward and downward counterfactuals respectively. We find that both promotion and prevention-oriented consumers gain content-specific benefits from upward counterfactuals regarding the corrective actions necessary for self-improvement. In addition, prevention-oriented consumers gain affective benefits from the negative affect associated with upward counterfactuals via a signal of insufficient goal progress; while promotion-oriented consumers gain affective benefits from the positive affect associated with downward counterfactuals via a signal of goal commitment.

By distinguishing between a goal progress versus a goal commitment lens, this research is the first to identify conditions were downward counterfactuals can increase consumers' goal persistence.

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So Cute! Consumers' Visual Engagement with Cuteness:
The Moderating Effects of Perceptions of Required Care and Caregiving Goals

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EXTENDED ABSTRACT

Conventional wisdom is that the incorporation of cute little beings in product messaging increases general appeal and enhances consumers' product engagement. Babies are included in the product messaging of baby-related products (e.g., diapers) and completely unrelated products (e.g., eTrade services), with the supposition that the inclusion of babies will capture and hold consumers' attention during product messaging.

Even though caregiving is thought to be the critical driver in engagement with cuteness, research has yet to manipulate care opportunities and measure parental care motivations. US Household demographics have changed substantially in the last 50 years. The share of adults living without children has changed from 52% in 1967 to 71% in 2017 (Schondelmyer 2017). "Cuteness" (physical traits such as large eyes and rounded features, Lorenz 1943) is thought to transmit a beckoning call for caregiving (Aragón et al. 2015; Sherman, Haidt, and Coan 2009). Given the large demographic shifts in parenthood, it is reasonable to question if responses to the call of cute stimuli are at time, at odds with modern day family planning motivations.

Some marketing messages depict infants as needing very high, protective care (for example Pure Protection campaign, Pampers 2018), and others depict infants as being quite robust (for example the Live, Learn and Get Luvs campaign, Luvs 2018). If these framing messages persuasively change consumers' perceptions of babies' need for care, then manipulated perceptions of babies' need for care (high care, low care) could interact with parenting motivations (desires to be or not be caregivers) to predict engagement with cute stimuli. We hypothesized the following:

Hypothesis: *For those who wish to become parents, engagement with babies will be highest when framing messages indicate that babies are fragile, and engagement will be lowest when framing messages suggest that babies are robust.*

Hypothesis: *For those who wish to remain childless, engagement with babies will be highest when framing messages emphasize that babies are robust, and engagement will be lowest when framing messages present babies as being fragile.*

Hypothesis: *Carryover effects will relate to consumers' evaluations of products associated with the infant stimulus.*

To test engagement, we selected a habituation paradigm. Habituation paradigms measure how a novel stimulus changes in its ability to capture initial and extended engagement over repeated exposures (Friedman 1972).

In Study 1, undergraduate students from a state university participated for course credit (N=297, 152 women, M_{age}=19.98, 78% White, 66 desired children). Participants read a supposed article depicting babies as robust, fragile, or control (no article). Manipulation checks verified that babies were considered fragile in the fragile condition, and robust in the robust condition, difference in (fragile=1 to robust=4) scores, t=13.40, p<.001. Participants rated each presentation of the baby (stimuli created by Borgi et al. 2014) as "engaging" and "tiresome (r)" (response options; 0 -20 *not at all*, 21 -40 *a*

little bit, 41 -60 *somewhat*, 61 -80 *mostly*, and 81 -100 *completely*). Ratings were averaged into a single engagement score. There was a significant position x condition x parenting motivation interaction, F(1, 2667)=8.41, p < .001. As hypothesized, for participants who wanted children, engagement declined to a lesser degree when they had read that babies are fragile (b=-3.21, SE=.36, t=8.96, p<.001), than when they had read that babies are robust (b=-4.38, SE=.47, t=9.35, p<.001). In contrast, for participants who currently did not want children, engagement showed less of decline when they had read that babies are robust (b=-2.85, SE=.17, t=16.37, p<.001) than when they had read that babies are fragile (b=-3.83, SE=.20, t=19.51, p<.001). The control condition closely paralleled the fragile condition (See Table 1.)[1].

In Study 2 (undergraduate students N=342, 168 women, M_{age}=20.25, 83% White, 80 students desired children), we tied real-world marketing strategies of Luvs robust babies (Luvs 2019), and Pampers' fragile babies (Pampers 2018).

Study 2 replicated our effects position x condition x parental motivation interaction, F(1, 3074)=5.61, p=.023. Additionally, participants were asked about their purchase intentions with 2 items (r=.43, df=340): "I would buy Pampers (Luvs) diapers if the need for diapers arose" and "If the need arose for diapers, I would NOT pick out Pampers (Luvs) diapers (r)". We measured brand value with two items (r=.73, df=340): "I like Pampers (Luvs) Brand" and "I trust the Pampers (Luvs) Brand." Engagement with the presented baby was related to increased engagement with the products presented on the filler trials, b=.07, SE=.03, t=2.36, p=.019. Engagement with the product trials was in turn related to both purchase intentions b=.21, SE=.073, t=3.27, p=.001(indirect effect LLCI=.003, ULCI=.038) and brand evaluations b=.25, SE=.04, t=3.45, p=.001 (indirect effect LLCI=.003, ULCI=.043).

This research challenged the conventional wisdom that the incorporation of cute beings leads to wholesale increases in consumer engagement. We found engagement to cute babies depended upon individual caregiving goals and perceptions of needed care. For those who desire children, engagement was highest when they perceived babies as fragile. In contrast, those who desired to remain childless, engagement was highest when they perceived babies as robust. Future research should test if these effects generalize to populations who have children, and to products that are not baby related.

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[1]   This investigation was replicated with baby animal stimuli (puppies and kittens). Details are available from the author.

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Playing with Tensions: How Bloggers Sustain Consumers' Engagement for Commercial Purposes

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EXTENDED ABSTRACT

Previous research on social media has noted that tensions may arise when bloggers begin to collaborate with brands for commercial purposes in their blogs (Kozinets et al. 2010; McQuarrie, Miller and Phillips 2013; Dolbec and Fischer 2015). Tensions are also found to threaten a sense of belonging in heterogeneous consumption communities (Thomas, Price and Schau 2012). While extant research emphasizes strategies to ease the tension, we found that bloggers on Chinese dominant social media platform WeChat actively use the tensions to engage their readers to collaborate on brand-related blogs.

Word-of-mouth marketing especially effective electronic word-of-mouth (e-WOM) marketing has been a focal concern in marketing studies and consumer research (Seo et al. 2018; Cho, Huh, and Faber 2014). Brand managers increasingly spend more of their marketing budget on e-WOM and continue to deploy effective e-WOM campaigns on western social media platforms (Kozinets et al., 2010; Fischer and Reuber, 2011). At the same time, social media influencers such as popular bloggers have begun to treat blogging as a full-time career, China is no exception. The challenge of promotional blogs is how bloggers can balance different emerging tensions between commercial and communal norms in sustaining their popularity. There are limited insights regarding how tensions contribute to digital engagement in the blogger-centered heterogeneous community, furthermore, we also know little about how bloggers create engaging stories with commercial content by using the tensions. To address this theoretical oversight, we bring this discussion to studies of social media and examine how successful bloggers engage their readers by using the heterogeneous tensions to create branded content and at the same time maintain their popularity.

The context in which we conduct our research is the Chinese social media platform WeChat. With more than 963 million monthly active users (according to the public report of the second quarter of 2017 of Tencent company), WeChat App has dominated Chinese social media space since its launch on January 21, 2011, since most western social media platforms are not available for Chinese consumers. We focus on a particular function of blogs on WeChat. Bloggers on WeChat can push a post (could be a voice message, an image or an article) to readers once a day. Although everyone could leave a comment, only comments selected by the blogger could be publicly displayed. The blogger can only select 100 comments per article. Filtered comments and the original blog become integrated and contribute to the whole reading experience. We focus on bloggers who regularly transform marketing messages into engaging and relevant stories for a devoted audience.

We used netnography (Kozinets 2002a; Kozinets 2015) and in-depth interviews (McCracken 1988) to collect data. The first author followed more than 50 most active WeChat blogs from December 2015 to December 2018, read blog entries and comments left by blog readers. We used an aggregate online news feed site http://www.ne-wrank.cn/ to identify data. This news feed has collected more than 10 million WeChat blogs and publish daily reports on their website and allowed us to view the daily, weekly, or monthly ranking of WeChat public accounts in different areas. Other WeChat blog ranking websites such as http://top.aiweibang.com/ or http://top.wxb.com/ were also used to identify WeChat blogs for our analysis. For the current study, we analyzed 10 popular WeChat blogs from December 2015 to December 2018. The selection of WeChat blogs was based on the blog entry's reading rate and ranking. We chose WeChat bloggers that represented a variety of different writing styles, but they all heavily relied on commercially oriented cooperation in blogs (e.g. with e-WOM messages integrated in entries).

Twenty-eight in-depth interviews were conducted with 16 popular bloggers and 12 marketers who used WeChat public account for promotions in China. Interview conversation began with semi-structured questions towards WeChat blog strategies and then follow a natural flow to explore in-depth perspectives of informants' experiences. Our data analysis was based on several iterative movements (Spiggle 1994; Kozinets 2015) some informants were asked to conduct additional interviews focused on the derived new questions until reaching sufficient interpretive understanding and the theoretical saturation.

Based on our data, we found that tensions are not necessarily a negative element in commercial campaigns, and heterogeneous tensions can be a source of creativity to facilitate digital engagement. Kozinets et al' (2010) emphasize narrative strategies in e-WOM marketing to reduce the tension. However, our findings show that readers are happy to accept commercial blogs when bloggers can skillfully utilize and transform these tensions. While fashion bloggers use misrecognition and authenticity to conceal the tensions (McQuarrie, Miller, and Phillips 2013), we found WeChat bloggers can face the tension and transform it into an opportunity to resonant with readers' empathy. While Dolbec and Fischer (2015) highlighted a commercial logic to understand consumers that may support bloggers' self-benefit seeking behavior, in order to reduce the tension between the logic of art and the logic of commerce, we found consumers appreciate and even desire commercial performance when the performance is delivered in a dramatisitic way (Deighton 1992). Holt (2002) highlighted future branding is no longer the product of marketer-contributed meaning but in the hands of consumers/ We found that top bloggers can collaborate with their audience to create meanings for different brands by using tension. Commercially oriented blogs are the product of the collaborated bloggers are playing the role between the consumers and the marketers which similar to a copywriter. Consumer research would benefit from examining how bloggers can use heterogeneous tensions to engage consumers in consumption communities. Future research can explore the positive aspect of the role of the tension arisen by heterogeneity in a consumption community (Thomas, Price and Schau 2012).

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When Bad News is Good

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EXTENDED ABSTRACT

People generally try to avoid bad news. Most patients would rather not receive a bad diagnosis. Most tenants would rather not receive word that their rent is being raised. Most car owners would rather not find out their vehicle needs expensive repairs. But are there circumstances under which the opposite might be true—when bad news may, paradoxically, be good?

Bad news often has the unique effect of guiding subsequent decisions and actions—even when those decisions and actions are themselves undesirable. For instance, a patient who receives objectively bad news ("You have a very severe injury") may be required to undergo surgery, while a patient receiving objectively better news ("You have a moderate injury") may have to choose between surgery and other treatment options. Thus, despite leading to an undesirable outcome, bad news may allow people to evade a difficult decision (i.e., whether or not to have surgery) and create situations in which people feel better with—and even actively prefer—objectively worse news.

Thus, this research investigates when and why bad news is good. We compare people's news preferences—the information they hope to receive—when there is versus is not a consequent decision to be made (e.g., whether or not to have surgery). Further, when there is a decision to be made, we compare the affective responses of those who receive worse versus better news, and investigate the mediating role of decisional conflict. In so doing, we demonstrate the conditions under which a systematic preference for objectively bad (versus objectively better) news can emerge. Finally, we explore a potential perverse incentive created by bad news: forgoing opportunities to improve one's circumstances (or move toward "better" news) if such a move introduces a difficult decision.

STUDY 1 All participants imagined having a shoulder tendon tear and awaiting news about the exact diagnosis; we simply varied whether participants had a decision to make based on news received. In the decision conditions, surgery was required above a specific threshold length (varied between-subjects as 2cm, 3cm, or 4cm); below that threshold, participants could opt for surgery but the decision was theirs to make. In the no decision conditions, threshold lengths were discussed but no consequent decision was required. The DV was preferred tendon tear length.

Naturally, smaller injuries are objectively better. However, we found that when facing a difficult decision, participants preferred larger, "above-threshold" tears (M=1.67cm, SE=.05) than participants not facing a decision (M=1.28, SE=.05; $F(1, 542)=28.25$, p<.001, $\eta^2=.05$). In addition, preferred tear length increased as the size of the threshold increased ($M_{2cm}=1.34$, SE=.06; $M_{3cm}=1.45$, SE=.06; $M_{4cm}=1.63$, SE=.06; $F(2, 542)=5.09$, p=.006, $\eta^2=.018$). Critically, these main effects were qualified by a significant interaction ($F(2, 542)=4.01$, p=.019, $\eta^2=.015$): among the decision conditions, there were significant differences in preferred tear length as a function of threshold size ($F(2, 272)=6.04$, p=.003, $\eta^2=.04$); however, there were nonsignificant differences among the no decision conditions ($F(2, 270)=1.15$, p=.32, $\eta^2=.008$). In other words, bad news was not indiscriminately preferred—it was only when a difficult decision was required and was specific to the threshold above which a decision was eliminated.

STUDIES 2A-B Studies 2A and 2B tested another medical scenario—whether or not to undergo an appendectomy—and varied the valence of news people received. In S2A, participants (between-subjects) either learned they had a 50% chance of appendicitis/50% chance of false alarm ("better news") or that they had a 95% chance of appendicitis/5% chance of false alarm ("worse news"). (Importantly, a pretest confirmed that "worse news" was, indeed, perceived to be worse.) All participants were then told they would have to decide about surgery, and asked how happy, relieved, and anxious (RC) they felt. Paradoxically, participants receiving worse news reported greater positive affect than participants receiving better news (p = .01, d = .36).

S2B used the same scenario but a within-subjects design: participants chose which type of news ("better" or "worse") they would rather receive. Most people (74%; vs. chance: p< .001) preferred worse news. By contrast, a pretest among a separate sample revealed that observers believed the opposite would be true: most (74%, 95% CI = [.65, .83]) believed that someone receiving the "worse news" would feel worse.

STUDY 3 While worse news may beget worse outcomes, it can deliver greater certainty, which can lower decisional conflict and increase positive affect. Therefore, bad news should be most beneficial when people are especially conflicted, whereas bad news should not confer incremental benefit when an easy choice exists. To test this, S3 varied both diagnosis (better news or worse news) and disease—appendicitis (like S2) or appendiceal cancer. We replicated S2's results for participants in the appendicitis condition; however, because people confronting cancer strongly prefer action to inaction (Ubel 2012), we predicted (and found) that participants in the appendiceal cancer condition would find the surgery decision relatively easy to make—regardless of the valence of the news—and differences in affective response would diminish (interaction: p=.048, $\eta^2=.009$). We also measured the role of decisional conflict as a mediator and found that decisional conflict varied as a function of news and disease type (interaction: p<.001, $\eta^2=.03$).

STUDY 4 What perverse incentives arise from bad news being good? Participants saw S1's shoulder tear scenario; everyone was told they had an "above-threshold" (3.5cm) tear. If interested, they could undergo intensive physical therapy which could reduce the tear size by 1cm, thus making it a "below-threshold" tear. In one condition ("no decision"), this improvement entailed no consequent decision; it would simply improve their injury. In a second condition ("decision"), this improvement also improved their injury, but meant going from definitely needing surgery to having surgery be optional—in other words, moving from having no choice to having a difficult choice. Our DV was interest in undergoing physical therapy (i.e., reducing their injury). People with (versus without) a decision to make were less interested in reducing their injury (p=.004, d=.41). Thus S4 results reveal one possible perverse incentive created by bad news being good: a reluctance to improve a bad situation when objective (but optional) improvement meant introducing a difficult decision.

Five studies demonstrated when and why bad news is good. Study 1 varied whether or not a decision had to be made and examined the resulting effect on news preferences: when facing a difficult choice, many people paradoxically preferred objectively worse news—even when worse news begot less preferred (Pretest 1) or objectively worse (Study 1) outcomes. Studies 2A and 2B varied news type (better or worse) and showed that people felt better after receiv-

ing worse news. Using mediation and moderation, Study 3 demonstrated the role of decisional conflict: bad news can reduce decisional conflict, which in turn can result in greater positive affect—but only within contexts where the right decision or choice is not obvious. Finally, Study 4 showed that people may be perversely incentivized to stick with bad news if improvement entails introducing a difficult decision.

Our findings make several theoretical contributions. First, we contribute to a general understanding of how people respond to difficult, consequential choices. Previous research has shown that consequential choices are emotionally burdensome for any decision-maker (Botti, Orfali, and Iyengar 2009; Kahn and Luce 2003); our results suggest that, under some conditions, such choices may be even more difficult for decision-makers who have received objectively better news. For example, Botti et al. (2009) showed that when facing the gut-wrenching decision of whether to take their premature infants off life support, parents making the choice themselves felt significantly worse than parents for whom the decision was made (i.e., by a doctor). Applying our findings to this paradigm, we might expect that—among the cohort of parents making the decision themselves—those whose newborns had a better prognosis (e.g., very slim chance of survival) may have felt, paradoxically, worse than those whose newborns had the worst prognosis possible (e.g., no chance of survival).

We also add to research on decision avoidance. Previous research has documented the many ways in which decision-makers try to dodge decisions already at hand (Anderson 2003)—offloading it onto someone else (Steffel and Williams 2017; Steffel, Williams, and Perrmann-Graham 2016), maintaining the status quo (Samuelson and Zeckhauser 1988), choosing inaction (Ritov and Baron 1992; Tykocinski, Pittman, and Tuttle 1995), or deferring a decision (Dhar 1997; Tversky and Shafir 1992). Adding to this, our findings document another important—and perhaps overlooked—tactic people may use to avoid a decision preemptively: a preference for worse news. Because bad news often eliminates options (Bor et al. 1993), it can result in bypassing difficult choices altogether, which can be beneficial to decision-makers. The fact that bad news can also beget bad outcomes highlights the costs people may be willing bear to avoid a hard choice.

Although not the focal element of our investigation, the self-other difference that emerged may be an interesting and fruitful area for future research. In asking observers to make predictions about how news affects decision-makers, we wanted to confirm our conceptualization of news—i.e., that "better news" was, in fact, perceived to be better, and that "worse news" was perceived to be worse. We additionally wanted to demonstrate that the benefit of bad news is counterintuitive and perhaps subject to being overlooked by key agents (e.g., doctors, friends and family). However, the mere fact that it was unanticipated—that observers seemed to attend to the valence of the news while overlooking the resulting decisional conflict that may ensue—is, itself, a curious and noteworthy finding. Understanding why the decision-maker's response was unanticipated may be an area for future investigation.

Relatedly, this self-other difference has significant practical implications. On some level, participants in our studies seemed to recognize their own preference for bad news—actively choosing worse over better news when presented with both options simultaneously (Studies 1 and 2B); however, this dynamic was not obvious to observers. This misprediction may have profound interpersonal consequences: without recognizing the negative impact of seemingly better news, people in support roles may miss the opportunity to counsel or console those who need it most. Given the modern emphasis on shared medical decision-making, this may be especially true in healthcare settings, where the onus of choice—and any resulting decisional conflict—is increasingly shifted from physicians to patients. In such cases, recognizing when and why a patient's decisional conflict is especially high—and what downstream consequences this can have—is of critical importance.

Perhaps also overlooked, the benefit of bad news may also introduce unanticipated perverse incentives for decision-makers. At baseline, people want to avoid bad news (no decision condition, Study 1), and after receiving it, are largely motivated to improve their situation (no decision condition, Study 4). However, this changes with the introduction of a difficult decision, which can lead some to actually hope for worse news (decision condition, Study 1; Study 2B) and can reduce interest in improving from "worse" to "better" if such improvement involves reintroducing a difficult decision (decision condition, Study 4). This presents complicated trade-offs and incentives for decision-makers, leading to altered preferences and choices that may potentially run counter to one's baseline preferences and even their own well-being.

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Stress Attenuates the Portion Size Effect via Suppressing Appetitive Motivation

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EXTENDED ABSTRACT

The present consumption environment in Western societies has typically been labeled as "obesogenic" and one of the more prolific cues (or "nudges", see Thaler and Sunstein 2008) in this environment is the portion size effect – the tendency to want and to consume more of (food) items which are presented in bigger portions (Hill et al. 2003; World Health Organization 2014; Young and Nestle 2012). While many studies suggest that the effect is fairly robust (Rolls, Morris, and Roe 2002; Diliberti et al. 2004; see Zlatevska et al. (2014) for a recent meta-analysis), other studies provide a more mixed picture. Several recent studies suggest that sometimes portion sizes are ineffective at influencing consumption (Spanos, Kenda, and Vartanian 2015; Versluis and Papies 2016) or, paradoxically, that small rather than larger portions can increase consumption (Coelho do Vale, Pieters, and Zeelenberg 2008; Scott et al. 2008; Holden and Zlatevska 2015). Such conflicting findings typically signal the presence of an – as yet unidentified – moderating factor that may qualify the strength and/or direction of the portion size effect.

The present research aims to aid in reconciling these conflicting findings on the portion size effect by focusing on the role of one such potentially modulating factor: stress. Given the constant presence of stress in consumers' everyday lives, it is surprising that there is so little empirical research examining the impact of stress on consumer behavior in general (but see Durante and Laran (2016) for an exception) and the portion size effect in particular. Stress occurs when the demands of an event challenge an individual's ability to cope with it (Lazarus and Folkman 1984). Previous research has shown that stress can affect food consumption in two ways, resulting either in overconsumption or underconsumption (Adam and Epel 2007; Torres and Nowson 2007). More specifically, a host of studies suggest that experiencing stress can increase approach motivation and reward sensitivity, fueled by disinhibiting, appetitive motivation (Starcke and Brand 2016). This work points to the possibility that stress may increase calorie intake (Kandiah et al. 2006; Oliver and Wardle 1999). Thus, in as far as stress increases food consumption, the portion size effect could become more pronounced under stressful conditions.

However, other work suggests that stress can induce acute avoidance behavior to cope with the stressor, typically observed as a freezing or stifling response (Cannon 1932). Such a stress-induced response is driven by inhibitory, appetitive-suppressing motivation (Charmandari, Tsigos, Chrousos 2005). This would point to stress eliciting a decrease in food intake (Grunberg and Straub 1992; Stone and Brownell 1994). Therefore, in as far as stress suppresses appetitive motivation, stress should attenuate the portion size effect.

Because the two possible moderating roles of stress can be argued as operating via the appetitive system, we decided to measure saliva secretion as a process measure. When people are exposed to food cues, the natural response is for your mouth to water, i.e. for salivary flow to increase (Nederkoorn, Smulders, and Jansen 2000; Spence 2011). Following the classical portion size effect, which implies that larger portions spur higher salivary flow levels, we propose that stress can either boost or attenuate this effect, such that when under stress, consumers will demonstrate either stronger or weaker appetitive responses and hence salivate either more or less to a larger food portion compared to a smaller food portion. As a result, this process will lead to either an increased or a reduced magnitude of the portion size effect under stressful conditions. To further pinpoint the underlying process, we also adopt a process by moderation approach (Spencer, Zanna, and Fong 2005). If shifts in appetitive motivation indeed underlie the impact of stress on the portion size effect, then we should be able to observe the predicted effects with varying levels of appetitive motivation. In the present research we focus on individual differences in appetitive motivation, as captured by the Behavioral Activation System (BAS, Carver 2004).

Three experiments tested our predictions. Experiment 1 (N = 642) set out to explore how stress affects the portion size effect, as indicated by consumption intentions for both a healthy and an unhealthy product. This experiment used a design with stress, portion size and product type as between subjects' factors. Experiment 2 (N = 166) aimed to replicate and extend our findings, by assessing the impact on actual food intake, using a different population and food product. This experiment used stress and portion size as between subjects' factors and food consumption as the main dependent variable. Finally, experiment 3 (N = 184) extended these results by assessing the underlying process of appetitive responses and physiological reaction, i.e. salivary flow level. This experiment used a design with stress and portion size as between subjects' factors and individual differences in appetitive motivation as a measured independent variable while salivary flow level served as the main dependent variable.

Across three experimental studies, we provide converging evidence and show that the portion size effect is attenuated when consumers are stressed (experiment 1, experiment 2). Although much of prior research has consistently found that people consume more food when they are faced with a larger portion compared to a smaller portion, which is widely known as the portion size effect, a few recent studies provided mixed evidence. We contribute to this literature by establishing an important boundary condition of the portion size effect. This research further contributes to prior work by demonstrating the underlying process of reduced appetitive motivation (experiment 3). In addition, the current findings advance our understanding of the stress-eating connection by revealing that being stressed can lead to reduced consumption of food. Our findings have implications for marketers, consumers, and public policymakers interested in understanding and reducing overconsumption.

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You Only Get One Shot: How Content Ephemerality Affects Information Processing and Viewing Behavior

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EXTENDED ABSTRACT

Traditional media is *ephemeral* in nature, and do not allow consumers to view displayed content multiple times. In contrast, content published on digital media platforms and social networks is by default *perpetual*, and can be easily viewed again. The growing popularity of ephemeral features in digital communication platforms (e.g., Snapchat, Instagram) motivated recent work in multiple fields (Ambrosin et al., 2014; Hofstetter, Rüppel & John, 2017). We extend that literature by exploring the effects of ephemerality on allocation of resources and behavior during information processing.

People do not put all their resources into processing any given stimulus, but adjust their allocation when viewing a specific piece of information (Kahneman, 1973; Lipman, 1995). Since recipients of messages do not know what the content of the message will be, the restriction of ephemerality entails a risk of missing information without being able to search for it again. We propose that consumers are cognizant of that risk when approaching ephemeral content, and thus strategically enhance their processing of it, in comparison to viewers of perpetual content. This proposition is supported by past work on other limitations showing that, for example, consumers are more attentive to products that are rare or available to only few people (Bozzolo and Brock, 1992; Schoormans and Robben, 1997),

In a series of studies (total N = 3,521), participants who knew they will be able to view content only once (versus multiple times) were found to use their resources to process it more thoroughly. Specifically, they paid more attention and remembered content better (Study 1), focused on relatively important aspects of a stimulus (Studies 2), and chose to view for longer both content (Study 3) and an ad preceding it (Study 4).

In all studies participants were informed that they will view some content, and were subsequently assigned to one of two ephemerality conditions; they were told that they will (the *ephemeral* condition) or will not (the *perpetual* condition) be able to view the content again. They then viewed the content and answered questions about it.

Study 1: Attention and Recall

Since directing attention to a stimulus improves its processing (Pashler, 1999), it is not surprising that people can strategically elevate their attention to information (Dweck et al., 2004). The goal of Study 1 was to test how ephemerality affects the level of attention directed to information while viewing it.

Method. Participants (MTurk, N = 2008) viewed a video recipe and answered a series of questions. Recall was measured using twenty true or false statements about the video. Attention was measured with a 7-point scale of the level of attention participants devoted to the video [1 = not at all, 7 = a lot].

Results. In comparison to the perpetual condition, participants in the ephemeral condition answered more questions correctly ($t(2006) = 3.13$, $p = .002$, $d = 0.14$), and reported paying more attention to the video ($t(2006) = 4.85$, $p < .001$, $d = 0.22$).

Study 2: Locus of Attention

People continuously shift the location of their attention during visual tasks in order to process more thoroughly relevant or important elements of the stimulus (Corbetta & Shulman, 2002). Study 2 tests how ephemerality affects viewers' focus on relatively important information while viewing a video.

Method. Participants (University behavioral lab; N = 123) were assigned to one of the two ephemerality conditions and viewed the same video used in Study 1. While watching the video, participants' eye fixations were recorded. A common approach to study where people focus their attention during a visual task is to define areas of interest within the visual field (AOIs; Holmqvist et al., 2011). We defined the AOIs to reflect whether participants were looking where important information (e.g., demonstration of the cooking procedure, names of ingredients) appeared or not.

Results. Participants in the ephemeral condition were more attentive to the relevant information displayed to them: they fixated more frequently on the areas where important information appeared than participants in the perpetual condition ($t(121) = 2.22$, $p = .028$, $d = 0.41$).

Study 3: Viewing Time

People elect to view content for longer when it is more interesting or harder to comprehend (Olney, Holbrook & Batra, 1991; Meyer, Sleiderink & Levelt, 1998). Study 3 tests how ephemerality affects elective viewing time of content.

Method. Participants (MTurk, N = 909) were asked to view a series of nine images. As opposed to the previous studies, they were able to view the images for as long as they wanted. After seeing the images, participants reported how much attention they invested in them on the same scale used in Study 1.

Results. Participants in the ephemeral condition spent more time viewing the images than participants in the perpetual condition ($t(907) = 5.97$, $p < .001$, $d = 0.40$). Consistent with Study 1, compared to the perpetual condition, participants in the ephemeral condition also reported paying more attention to the images ($t(907) = 2.42$, $p = .016$, $d = 0.15$).

Study 4: Willingness to View an Ad

A popular advertising technique used on digital media is showing consumers ads before they can see content, and allow them to skip the ad a few seconds after it had started. Study 4 explores how the ephemerality of content affects consumers' willingness to view an ad preceding it.

Method. Participants (MTurk, N = 481) were told that they will view a video preceded by an ad, and that similarly to streaming services they will be able to skip the ad after a few seconds. After viewing the ad for as long as they wanted participants watched a video and reported how much attention they invested in the ad on the same scale used in the previous studies.

Results. Participants in the ephemeral condition spent more time viewing the ad than participants in the perpetual condition ($t(479) = 3.87$, $p < .001$, $d = 0.35$), as well as reported paying more attention to it ($t(479) = 3.34$, $p = .013$, $d = 0.31$).

Conclusion

We find that people invest more resources in processing content when they know they will not be able to view it again. This suggests that marketers can capture consumers' attention more effectively by

merely choosing to communicate via an ephemeral (versus perpetual) channel.

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Products as Consumption Companions: How Culture Influences Consumer Responses to Anthropomorphic Products

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EXTENDED ABSTRACT

In a Singapore bakery, packaging on a loaf of bread reads, "I am freshly baked using main ingredients imported from Japan." Anthropomorphism, the attribution of human-like properties to nonhuman agents and objects, is generally considered a universal phenomenon (Epley et al., 2007), and *marketers often induce anthropomorphic thought towards products via explicit advertising (*Aggarwal and McGill 2007*), brand names (*Aaker 1997*) and visual product features (*Chandler and Schwartz 2010*). Surprisingly, despite the seemingly disproportionate popularity of anthropomorphic products in Eastern countries, no research has actually tested whether Eastern consumers do in fact respond more favorably to* anthropomorphic products than their Western counterparts, nor examined what particular cultural traits might drive such disparate preferences. We address this gap by examining how culture influences consumer responses to anthropomorphic products and uncovering the specific individual differences driving such effects. Specifically, we zero in on a well-established and robust cultural factor in both psychology and marketing literatures: collectivism (Hofstede 1984; Triandis 1996).

We propose that because collectivistic consumers assign greater value to communal (versus solitary) consumption experiences (Markus and Kitayama, 1991), and since anthropomorphized objects can serve as surrogates fulfilling social needs (Mourey et al., 2017), collectivistic consumers should reap greater rewards from the consumption of anthropomorphic (versus non-anthropomorphic) products. However, we would not expect this for consumers low in collectivism. To our knowledge, this is the first research demonstrating that culture can influence consumer responses to anthropomorphic products. To test our hypotheses, we analyzed a real-world dataset and conducted four controlled experiments (summarized in Table 1).

We begin by investigating the prevalence of anthropomorphic products in Eastern (vs. Western) countries. To assess this possibility, we examined an international dataset that comprised the top three best-selling products across a number of fast-moving consumer goods categories (N = 372) across both Eastern (e.g., China.) and Western nations (e.g., USA). We estimated the data using the *lme4* package (Bates et al. 2015) for R (R Core Team 2014). Results of our model revealed a significant effect of culture *(β = 1.28, z = 2.65, p = .008)*. In the Eastern countries, the likelihood that anthropomorphic traits would be present in any particular product was 35%, while in Western countries the likelihood was only 20%. In sum, this study provided real-world evidence that the prevalence of anthropomorphic products is higher in Eastern versus Western cultures.

Study 2 (N = 203) was a 2 (Ethnicity: Asian American vs. Non-Asian American) x 2 (Product Description: Control vs. Anthropomorphic) between-subjects design. ANOVA results revealed a significant Ethnicity x Description interaction on product evaluation ($p < .001$). An analysis of contrasts supported our hypothesized effect: Asian Americans displayed more positive evaluations for the anthropomorphic versus non-anthropomorphic tablet ($M_{Control} = 4.51$ versus $M_{Anthropomorphic} = 5.13$, $p < .02$). Interestingly, though not hypothesized, those in the low collectivism condition showed the reverse pattern ($M_{Control} = 5.30$ versus $M_{Anthropomorphic} = 4.69$, $p < .02$).

Study 3 (N = 402) extended our findings by testing the effects of procedurally manipulated collectivism (Aaker and Lee, 2001) and

by presenting a different product category to the participants (a red vacuum cleaner). ANOVA results revealed a significant Collectivism x Anthropomorphic Traits interaction on product evaluation of the vacuum ($p < .05$), supporting our proposed moderated effect: those in the high collectivism condition displayed more positive evaluations for the anthropomorphic vacuum cleaner ($M_{Control} = 4.38$ versus $M_{Anthropomorphic} = 4.82$, $p < .02$), while those in the low collectivism condition did not show this evaluative preference ($M_{Control} = 4.71$ versus $M_{Anthropomorphic} = 4.63$, $p > .66$).

A fourth study (N = 402) replicated the interactive effect with yet another product (a clock) and with collectivism measured as a continuous moderator (Triandis, 1996). A moderation analysis (PROCESS model 1; Hayes 2013) with anthropomorphic traits as the independent variable and collectivism as a continuous moderator produced a significant interaction on product evaluation of the clock ($β = .33$, t (374) = 1.99, $p < .05$). An examination of conditional effects revealed that those high in trait collectivism (+1 SD above the mean) showed more positive evaluation for the anthropomorphic (vs. non-anthropomorphic) clock ($M_{Control} = 3.97$ versus $M_{Anthropomorphic} = 4.54$; $β = .57$, t (374) = 2.33, $p < .03$). For those low in trait collectivism (1 SD below the mean), there was no significant difference in evaluations for the two clocks ($M_{Control} = 3.69$ versus $M_{Anthropomorphic} = 3.57$; $β = -.12$, t (374) = -.50, $p > .60$).

Study 5 (N = 238) allowed us to measure participants' enjoyment upon actually consuming a product and to examine the underlying process. This study employed a 2 (Collectivism: Low versus High) by 2 (Anthropomorphic traits: Absent vs. Present) between-subjects design. To manipulate collectivism, we adapted an open-ended response protocol from previous literature (Trafimow et al., 1997). As part of a purportedly separate study, participants were asked to taste and evaluate chocolate candies (either had neutral face imprinted or blank). ANOVA results revealed a significant Collectivism x Anthropomorphic Traits interaction on enjoyment ($p < .02$). An analysis of contrasts replicated our proposed moderated effect: those in the high collectivism condition reported greater enjoyment of the anthropomorphic versus non-anthropomorphic candies ($M_{Control} = 5.24$ versus $M_{Anthropomorphic} = 5.71$, $p=.08$). As found in study 2, though not hypothesized, those in the low collectivism condition showed the reverse pattern, displaying greater enjoyment of the non-anthropomorphic candies ($M_{Control} = 5.53$ versus $M_{Anthropomorphic} = 5.02$, $p = .06$). Importantly, results of a moderated mediation analysis with 10,000 bootstrapped samples (Hayes, 2013; model 8) demonstrated that for individuals in the high collectivism condition, *perceived consumption companionship* mediated the effect of anthropomorphic traits on enjoyment (95% CI: .0072 to .2772). The indirect effect was not significant for participants in the low collectivism condition (95% CI: -.0959 to .1319).

Thus, in five studies, we provide empirical evidence of the impact of culture on consumer responses to anthropomorphic products and demonstrate the underlying reason.

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Do Humanized Products Create Weak Brands?
The Effect of Product Anthropomorphism on Brand Attitude Certainty

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EXTENDED ABSTRACT

Recent technological advances in artificial intelligence have led to the development of smart devices that increasingly appear humanlike to the consumer (Chen, Wan, and Levy 2017; Epley, Waytz, and Cacioppo 2007; Hoffman and Novak 2018; Waytz, Heafner, and Epley 2014). We propose that such anthropomorphized products are no longer construed as typical products of the brand but as "product individuals" with very specific, idiosyncratic characteristics, which distinguish them from the brand. As a consequence of the resulting inconsistency between the product and its brand, consumers' certainty about their brand attitudes is hypothesized to decrease. This effect is relevant because brand attitude certainty determines the extent to which consumers' brand attitudes are "consequential" (e.g., predictive of brand loyalty). In other words, our findings indicate that anthropomorphism undermines a company's investments into positive brand attitudes as these become less likely to translate into desirable brand-related behaviors.

THE EFFECT OF ANTHROPOMORPHISM ON BRAND ATTITUDE CERTAINTY

Our proposition that product anthropomorphism decreases brand attitude certainty is based on two arguments. First, we hypothesize that anthropomorphized products are no longer construed as typical products of the brand but as "product individuals" with very specific, idiosyncratic characteristics that distinguish them from the brand, thus leading to a lower level of product-brand consistency. Second, a lower level of product-brand consistency should result in a lower brand attitude certainty (Rucker et al. 2014).

To illustrate the rationale underlying the first argument, we conducted a pre-study in which 94 consumers were asked to describe their smartphone as if it was a person. The following observations emerged from this pre-study: (a) Anthropomorphizing a product seems equivalent to individualizing it. Consumers created product individuals in their minds that seem as diverse and idiosyncratic as the consumers themselves. (b) Only one participant explicitly described her phone by categorizing it as an "Apple phone", while the other 93 participants did not refer to the brand to describe their device.

These observations are remarkably similar to findings in the literature on impression formation, which distinguishes between individuation and categorization processes (Fiske and Neuberg 1990). According to this line of research, individuating information on a target leads perceivers to avoid category-based, stereotypic inferences and instead focus on individual attributes that distinguish the target from the mental category it is associated with (Bodenhausen, Macrae, and Sherman 1999; Kunda and Thagard 1996). In the present research context, the dominant mental category that a product is associated with is its brand (Loken and John 1993). Therefore, the more a consumer perceives a product as humanlike and thus endows it with individuating attributes, the more atypical and different the product should appear relative to its brand. In summary, we propose that anthropomorphism magnifies perceived differences between the product and its brand—humanized products are perceived as less consistent with the brand, whereas non-humanized products are perceived as more representative of the brand.

In terms of the second argument, there is ample evidence in the certainty literature that perceived inconsistencies regarding an attitude object—such as the hypothesized inconsistency between a product individual and its brand—lead to reductions in attitude certainty (Rucker et al. 2014). In particular, we suggest that the product individual as an atypical brand representative may obscure what the brand stands for and thus diminish consumers' certainty about their brand attitude.

Hypothesis: *Compared to non-anthropomorphized products, anthropomorphized products reduce consumers' brand attitude certainty.*

Hypothesis: *Perceived product-brand consistency mediates the effect of product anthropomorphism on brand attitude certainty.*

STUDY 1

We recruited 517 smartphone owners from MTurk to provide observational field evidence for our hypotheses. We measured the degree to which participants viewed their own phone as humanlike (i.e., anthropomorphism), their attitude towards the smartphone brand, brand attitude certainty, product-brand consistency, and brand loyalty.

Regression analysis indicates that anthropomorphism has a negative effect on brand attitude certainty, thus providing support for H1. Moreover, we find that product-brand consistency is a significant mediator of this effect. This result is consistent with H2. Importantly, study 1 also shows that the negative effect of anthropomorphism on brand attitude certainty has an important downstream consequence—specifically, we find that participants' brand attitudes become less "consequential" (Rucker et al. 2014), as evidenced by a significantly reduced effect of brand attitudes on brand loyalty.

STUDY 2

Study 2 was designed as a controlled experiment in which we manipulated product anthropomorphism to provide a stronger test of causality. We recruited 164 smartphone owners from MTurk. Twenty-seven participants failed an instructional manipulation check and were thus excluded, resulting in a final sample of 137. Following Mourey, Olson, and Yoon (2017), participants were randomly assigned to an anthropomorphism or a control condition and had to answer ten questions about their smartphone, which were either phrased in a neutral way (control condition) or characterized by a "lifelike, agentic phrasing" (anthropomorphism condition; Mourey et al. 2017, 417). We also measured brand attitude, brand attitude certainty, and product-brand consistency.

Consistent with H1, we find that participants humanizing their smartphone have a significantly lower level of brand attitude certainty. In support of H2, product-brand consistency significantly mediates this effect.

CONCLUSIONS

This research contributes to the recent discussion on the effects of humanlike smart devices (Hoffman and Novak 2018) by showing that product anthropomorphism decreases perceived product-brand consistency, which in turn reduces consumers' brand attitude certainty.

Furthermore, our research suggests that anthropomorphism contributes to a "decoupling" of brand attitudes and brand-related behaviors such as brand loyalty. In other words, every dollar spent to increase consumers' brand attitudes may be less likely to pay off in terms of repurchase behavior due to the increasing trend toward anthropomorphism. From this perspective, our findings add to the stream of research that focuses on potential downsides of using anthropomorphism as a marketing tool (e.g., Puzakova and Aggarwal 2018).

Future research should investigate the postulated effects in the context of other product categories and based on different manipulations of anthropomorphism. Moreover, additional research may explore boundary conditions of these effects as well as remedies that firms can use to prevent these effects.

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Beyond Sharing My Building: My Neighbors Share My Room!
When Collective Psychological Ownership Matters.

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EXTENDED ABSTRACT

Sharing what we own might be motivated by altruistic considerations (Belk, 2014) or by access-based consumption (Bardhi et Eckhardt, 2012). However, researchers did not consider cases where consumers share the ownership of the same good, as it happens for instance in consumers cooperatives (Beal & Sabadie, 2018). We propose that sharing ownership induces particular behaviors and collective psychological ownership development. This research deals with housing coops, halfway between rental and property: the housing coop members own a share of the coop, which legally owns the building, and decisions for the place are made democratically along the principle one person= one voice. Therefore, members have the bare ownership of the building and, as residents, they benefit from the usufruct of each private space (in their own apartments) and of the collective spaces they share with their neighbors (for example the common living room).

Historically, housing cooperatives have been developed for deprived populations to access property but, for over a decade, the idea around living differently, using this urban alternative, emerged and bore fruit inside the civil society (Bloom et Lasner, 2016). The particular case of housing coop's, flourishing parallel to the rise of the "sharing and collaborative economy", are particularly fertile grounds to highlight the variety of ways members pool their sense of ownership and make decisions collectively in their shareable daily lives. We propose that this consumption context allows the arising of Collective Psychological Ownership – CPO --.

This research first contributes to ownership literature. Previous marketing research focuses on ownership at the individual level distinguishing legal ownership from psychological ownership -- Individual Psychological Ownership -- IPO (Pierce and al, 2003). It has been suggested that psychological ownership is a midway point between individual and collective level (Pierce and Jussila, 2010). However, the CPO has not yet been brought to the consumer research to understand how this feeling has been built up over time and under which conditions CPO is manifested itself. We suggest that, in housing coop, CPO should arise toward common spaces. Second, this research investigates the dynamic between IPO and CPO through the individual strategies applied by the owners depending on the private or collective spaces. Then, members exhibit their appropriation behaviors inside collective spaces to express themselves which includes developing IPO in those common spaces. In mirror with appropriation dynamic, we suggest that CPO emerge in private spaces inside housing cooperatives.

In spring 2018, we began a qualitative study inside a housing cooperative community in Toulouse, France. We have conducted a series of field trips to Abricoop using an ethnographic approach allowed us to observe the practices through an immersion inside this community. So, we gradually moved from describing places and members behaviors to sharing pleasant moments with them including sharing daily meals, going to meetings with housing coops neighbors, cooking diners… We mixed up various data collection materials, such as keeping a field diary, describing daily observations and personal impressions of our fieldwork. We, then, interviewed each member individually, at home. The *"how is to live everyday inside the housing cooperative"* represents the backbone of each interview were informants clearly details each collective activities with their neighbors and personal engagements to the cooperative. After each interview, we gave each member a Polaroid camera to control their photographic snapshot and to illustrate the meaning of ownership by retracing the appropriation processes. Camera in hands, they describe motivations behind each snapshot leaving a commentary on photographs.

The data analysis identifies two types of well-defined spaces in the building according to whether their usufruct is collective or individual. Each member is usufructured of his apartment whereas the usufruct of the common room, for example, is collective and governed by common rules (indicate the dates of expiry when food is deposited in the common fridge, put a coin for each use of washing machine). However, a spatial analysis of the feeling of psychological ownership emphasizes that the IPO is not limited to the private space and that CPO is not restricted to the collective space.

Developing the sense of ownership is more likely to appear at collective level. First data analysis suggest that members perceive their CPO when they can admit that themselves and other members of the cooperative are sharing more than a building, it might be common ideas, goals, values…*"[…] what seduced us was the cooperative way of life, we couldn't imagine another way to live, this idea of sharing property, being in social mix […]" T (male, 42, mobility advisor).* This good team chemistry enhances their collective feeling of ownership by using a "collaborative vocabulary" ("*our common room", "our garden", "our couch", "our Landry"*).

Then*,* many of cooperative members seek to maintain their IPO by putting some valuable objects (or not) in collective spaces. The appropriation behaviors that members exhibit in their collective spaces are mostly by bringing a part of their homes to share it with other members of cooperative *"this is my couch and this is our place!"* told me P (*male, 50, professor*) in front of a black couch inside the main entrance. As Belk (1988) said, if members' objects are part of their extended selves, so, when they give access to it, they share and even divest extensions of themselves, embodying a stunning power over the group.

Collectivization of private spaces are variously existing in some individual spaces by offering free-access of "*me*" to "*us*"; this case of sharing service with ownership benefits (Belk, 2014) enhances CPO by proclaiming the rights of ownership. Let's talk also about L (male, 40, journalist) who created a play room; they bought collectively many games and he put a free-access to his apartment letting others play inside it. Then, we have M.A & P., well-known as Buddhists, they converted a corner of their living room into a sacred element to make prayers, meditations etc… Those examples contribute to understand that CPO manifests itself in a context where the legal ownership is individual.

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How Corporate Purpose Affects Employees' Sustainable Behaviors: The Moderating Role of Autonomy and Culture

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EXTENDED ABSTRACT

Despite dire warnings about global warming, carbon emissions by the world's largest companies are increasing. Only a few companies have implemented strategies for managing carbon emissions and water resources, and only a third of the 600 largest public US companies have any kind of sustainability oversight at the board level (Bhattacharya 2018).

We argue that the sustainability movement is failing not because companies pursue the wrong goals but because they do so in the wrong way. Companies have never been more conscious of the need to do business in an environmentally, socially, and economically responsible fashion. But when it comes to practicing and not just preaching sustainability, many struggle to develop and implement a sustainable business model.

To tackle the urgent sustainability issues that we are facing, a large-scale transformation is necessary which can only be achieved if all employees are on board and show strong engagement in sustainability[1].

Recently, influential CEOs such as Larry Fink (Blackrock) or Paul Polman (Unilever) have started to emphasize the "higher purpose" of their companies, defined as "a concrete goal or objective for the firm that reaches beyond profit maximization" (Henderson and van den Steen 2015, p. 327), based at least in part on the belief that it has the power to inspire their entire workforce to live and breathe sustainability in the workplace. But how effective is the increasingly prevalent CEO rhetoric about purpose in encouraging employees' sustainable behaviors? Despite the ubiquity of the chatter on purpose in the business world, these questions, to date, remain unanswered.

The conceptual framework developed in this paper proposes that employees' awareness of their company's purpose enhances their sustainable behaviors via a reduction in justification strategies, that is, by reducing employees' tendency to make excuses for why they do not take ownership of sustainability. However, we posit that this positive effect will materialize only if they have a certain level of autonomy and if a sustainability culture exists in the organization. The paper tests the model using a cross-sectional survey of 297 employees from various companies and industries. The results render full support for the hypothesized model.

CORPORATE PURPOSE AND SUSTAINABLE BEHAVIORS

Henderson and van den Steen (2015) propose that a firm's purpose can create value, beyond its social impact, by developing or strengthening employees' identity and reputation. Because people care deeply about having a positive identity and reputation and because firms have become effective carriers of identity and reputation, prosocial employees exert more effort on the job in a purpose oriented company.

According to Gartenberg et al. (2019) there has been little empirical research on the role of purpose in strategic management. The authors stress that this is especially surprising given a fivefold increase in public conversation about purpose between 1995 and 2016. Recent contributions have linked corporate purpose to firm financial performance (Gartenberg et al. 2019) and employee well-being (Parmar, Keevil, and Wicks 2018) but to the best of our knowledge, the link between corporate purpose and employees' sustainable behaviors represents a heretofore research void. In this paper, we aim to remedy this research gap.

RESEARCH MODEL

Bartlett and Goshal (1994) have explained that as companies grow larger and more complex, employees can come to feel more like cogs in a machine than members of a team. At the same time, the workplace is becoming a primary means for personal fulfilment and employees don't just want to work for a company, they want to belong to an organization. Sustainable behaviors at work can be a way to seek such personal fulfilment and to feel connected to a higher purpose.

Recently, an upcoming stream of research has scrutinized employees' work-related sustainable behaviors (Boiral and Paillé 2012; Paillé and Boiral 2013) and uncovered important determinants such as human resource management, perceived organizational support, or peer support. We propose that employees' awareness of their organization's higher purpose is a crucial driver of their sustainable behaviors at work. Top managements' statements about the company's higher purpose set a standard for behavior that is likely to inspire employees and enthuse them about social and environmental issues. At a minimum, even if they fail to inspire employees, such statements will exert pressure to behave in line with this standard. Thus, we hypothesize:

> *Hypothesis:* *Employees' awareness of the company's purpose is positively related to their sustainable behaviors at work.*

Many employees will feel inspired to contribute to sustainable development but realize that their own behavior (e.g., using excessive plastic packaging during their day-to-day activities at work) are in conflict with this goal. The conflict between aspired and real behavior will result in feelings of psychological discomfort and cognitive dissonance (Festinger 1957; Cooper and Fazio 1984). Ways to cope with such self-threats include trying to neutralize them and thereby justify the own behavior, for instance by trivializing the negative outcomes of not acting in a sustainable way, or by blaming others for not taking action.

We propose that being aware of the company's purpose will reduce employees' tendency to use justification strategies and inspire them to take ownership of sustainability:

> *Hypothesis*: *The relationship between employees' awareness of the company's purpose and their sustainable behaviors is mediated by a reduction in their justification strategies for not engaging in sustainability.*

Gartenberg et al. (2019) found that the more senior the employee, the stronger is the perceived purpose of the organization. Importantly, the authors state that employees in more senior positions will

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[1] https://www.theguardian.com/sustainable-business/employee-engagement-sustainability-strategy

respond more to the higher purpose of their organization as they have a greater responsibility to influence the organization's goals.

We argue that the higher up in the organization an employee finds him- or herself, the more autonomy he or she will have to transform the organization towards more sustainability. Thus, we propose that the effect of purpose on sustainable behaviors will be stronger for more senior employees and that also the mediated effect via a reduction in justification strategies will be moderated by level in the organization:

Hypothesis: *The mediated effect of employees' awareness of the company's purpose on their sustainable behaviors via reduced justification strategies is moderated by their level in the organization and the resulting autonomy. The higher employees' level in the organization and hence their autonomy, the stronger the link between purpose and sustainability.*

Recently, in their study on corporate culture at more than 1,300 North American firms, Graham et al. (2016) have revealed that more than 90% of executives believe that culture is important or very important and 92% believe improving culture would increase firm value.

Bartlett and Goshal (1997) point to the importance of building an organizational culture in which employees know that they are connected with and are contributing to the overall corporate purpose. Quinn and Thakor (2018) further explain that in many cases, the existing cultures in companies tend to impede movement towards a more purpose-driven organization, especially as managers in many cases resist change. Corporate culture is an important contingency factor for the success of an organization's transformation towards sustainability.

In line with this literature, we propose that a sustainability culture in the organization will strengthen the purpose-sustainability link:

Hypothesis: *The mediated effect of employees' awareness of the company's purpose on their sustainable behaviors via reduced justification strategies is moderated by their perception of the culture in the organization. The more employees perceive that a sustainability culture exists in the organization, the stronger the link between purpose and sustainability.*

EMPIRICAL STUDY

To test the research model we conducted a cross-sectional survey on Prolific[2] (N=297). We screened respondents and only included those who were currently employed in a for-profit company. The online-questionnaire was programmed as a series of webpages. Respondents were paid approx. 1.50$US for their participation, as suggested by the Prolific platform.

Respondents read an introductory text explaining what sustainability means. Following this intro, respondents were asked to report their own sustainable behaviors at work using five open text boxes for the responses.

Then, we included a brief text which explained the meaning of companies' higher purpose and asked respondents whether they are aware of their company's higher purpose. We asked them to describe or provide their company's higher purpose in an open text box.

Subsequently, we used seven-point Likert scales (1= I do not agree at all; 7= I fully agree) to elicit respondents' justification strategies (e.g., Whether my company is sustainable or not is not my responsibility, The pressure to make money is too high for me to think about sustainability while making business decisions, etc., alpha=.79). Respondents' perceptions of their organization's sustainability culture was captured using a multi-item 5 point Likert scale, (e.g., There is a strong sustainability culture in our organization, In our company, sustainability is everybody's problem, etc., alpha=.96). Finally, we asked respondents whether they work on management level (0=no; 1=yes) and whether they lead a team (0=no; 1=yes) as proxies for autonomy.

To operationalize our independent variable purpose and our dependent variable sustainable behavior, we coded the responses from the open text boxes. For purpose we checked all entries and assigned the value 1 if respondents reported to be aware of a purpose of their company and described their company's purpose in the open text box, empty open box=0. In a second stage, if responses that included a description of the company's purpose were not in line with our formal understanding of companies' higher purpose (e.g., some respondents stated higher purpose such as "provide quality service"), we coded them 1 and responses in line with our understanding of a higher purpose were coded as 2, indicating that respondent did not only report to be aware of some higher purpose of their organization but actually understood their company's purpose to be related to sustainability.

For sustainable behaviors, we first checked which of the entries in the five open text boxes qualified as sustainable behavior. We excluded answers like "work hard" because these do not qualify as sustainable behaviors. We counted how many valid behaviors each respondent reported; ranges from 0 to 5.

Results

31% of respondents were aware of their company's higher purpose, but only 15.2% reported a purpose that was in line with our understanding.

The mean value for our dependent variable sustainable behavior is 2.04 with a standard deviation of 1.63. In general, the behaviors reported in the open text boxes reveal that employees find manifold ways to make their organizations more sustainable (e.g., "Using less paper", "eat from my reusable plate," etc.).

To test our model, we used SPSS Process (Version 3.0, MODEL 4 and MODEL 7). First, we estimated MODEL 4 to test H_1 and H_2. In line with our theorizing, both purpose (β=.245; p<.05) as well as justification strategies (β=-.330; p<.00) have significant effects on sustainable behaviors. Further, the indirect effect of purpose on sustainable behaviors via reduced justification strategies is positive and significant (β=.073 [.006;.159]).

In a second step, we estimated MODEL 7 to test $H_{3a\&b}$. In support of H_{3a}, there is significant interaction between purpose and autonomy (β=-.460; p=.04). The indirect effect of purpose on sustainability via justification strategies is insignificant for low autonomy but significantly positive for high autonomy (β=.183 [.067; .336]).

In line with H_{3b}, we find a significant interaction between purpose and sustainability culture (β=-.221; p<.00). Looking at the simple slopes reveals that the indirect effect of purpose on sustainability via justification strategies is insignificant at low (-1SD) and medium levels of sustainability culture, but significantly positive at high levels (+1SD; β=.168 [.063; .300]).

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2   https://prolific.ac/

GENERAL DISCUSSION

The empirical results fully support our hypothesized model. We find that employees' awareness of their company's higher purpose has the potential to increase their workplace sustainable behaviors via a reduction in justification strategies. This, however, crucially depends on their autonomy to effect changes in the organization as well as the sustainability culture in the organization.

The results contribute to the literature in three main ways. First, to the best of our knowledge, this is the first paper to establish a link between employees' awareness of their company's purpose and engagement in sustainable behaviors, potentially enabling, across all employees, the sustainability transformation urgently needed. Second, we establish the critical role of employees' justification strategies in the purpose – sustainability engagement link: awareness of the company purpose lowers employees' likelihood of justifying why they do not engage in sustainable behaviors. Finally, we unearth some key contingencies in the purpose – sustainability link: the relationship between employees' awareness of a firm's purpose and their sustainable actions hinges on the autonomy they have within the organization as well as their perceptions of the organizational culture.

Our study generates important implications for managers. First and foremost, companies should articulate their higher purpose, beyond merely seeking profits, and actively communicate it to their workforce. At the same time, they should keep in mind that for purpose to be maximally effective in driving employees' sustainable behaviors, they not only need to feel empowered but also feel that the culture of the organization actually supports sustainability innovations and behaviors.

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The Effect of Start/End Temporal Landmarks on Consumers' Visual Attention and Judgments

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EXTENDED ABSTRACT

The same point in time can be framed as either the start or end of a given time period. For example, students might frame the end of August as the end of summer or the start of a new school semester. While this framing of points in time as a start or end is relatively common across cultures generally and in marketing specifically, little to no research has examined the effects of temporal framing on consumer behavior, and a number of interesting research questions arise. For example, will consumers' reactions differ when presented with a promotion framed as a start versus end of a period of time? Will different time frames change consumers preferences? If yes, why? These questions have clear strategic importance to marketers but have not been explored by marketing researchers. The current research aims to address these research questions by examining the effects of different temporal landmarks on consumer perception and behavior.

Temporal landmarks refer to those points in time that "stand out more starkly than others on socially shared calendars or personal life timelines" (Dai, Milkman, & Riis, 2014; Shum, 1998). Previous research has shown that temporal landmarks can significantly influence individuals' self-image (Peetz & Wilson, 2014), self-improvement motivation (Dai et al., 2014), and psychological resources allocation (Kouchaki & Smith, 2013). Differing from previous research on temporal landmarks, the current work explores how framing temporal landmarks as either a start- or end-point changes people's attentional focus and subsequent judgments. Time is typically described as an ordered sequence. The start of an ordered sequence is always associated with the left side while the end is associated with the right side. Thus, we propose making a start temporal landmark salient will shift consumers' visual attention to the left, while making an end temporal landmark salient will shift consumers' attention to the right. Further, supported by Shen and Sengupta (2013)'s finding that auditory stimuli can shift visual attention, resulting in an increased preference for a visually processed item located in the same direction as the auditory stimulus, we propose that a match between attentional focus which is shifted by different temporal landmarks and the location of a target object should increase preference for that target object via perceived ease of processing (i.e. fluency).

We conducted three studies to examine our hypotheses. In study 1, we examined the effect of temporal landmarks on consumer's visual attention. One hundred sixty-eight Mturk registers took part in this 2(temporal landmark: start vs. end) × 2 (price comparison: $8.25 and $6.27 vs. $8.25 and $6.23) between-subjects design study. First, we manipulated temporal landmark through presenting three pictures of street scenes which were taken at 8 am (the start condition) or 10 pm (the end condition) and asked participants to write down what they would do and how they would feel if it was 8 am or 10 pm right now. Then, we asked participants to evaluate the price difference of a stapler which the original price was always $8.25, but the sale price was either $6.27 or $6.23. A 2 × 2 ANOVA revealed a significant interaction effect($F(1,164) = 4.21$, $p = .04$). Specifically, when comparing $8.25 with $6.27, participants reported a greater perceived price difference in the start condition compared to the end condition ($p = .044$). However, this effect did not obtain when comparing $8.25 with $6.23.

Study 2 was designed to explore proposed temporal – spatial congruity effect. One hundred fifty-six participants were recruited from a Chinese online data collection website. First, participants were asked to imagine that they were quitting their current job (the end condition), or they had just moved to a new city (the start condition). Participants then examined an actual advertising flyer and were instructed to find the target product "Dove chocolates" which is on the left of the flyer. Participants needed to report the ease of search and their store attitude. Following the PROCESS procedure suggested by Hayes (2017), we found that temporal – spatial congruity increased perceived ease of search (subjective measure of fluency), which then increased individuals' supermarket attitude. More important, the indirect (mediating) effect was negative and had a 95% confidence interval that excluded zero ($\beta = -0.40$, 95% CI = [-0.713, -0.139]).

In study 3, one hundred and ninety-six students were randomly assigned to a 2 (attentional focus: left vs. right) × 2 (temporal landmark: start vs. end) between-subjects design study. Participants were instructed to write down a friendship note to their friend. We manipulated their left/right attentional focus through asking them to write down words on the left/right side of the note. After that, participants were asked to choose one date a list of six dates to send the note to their friends. Specifically, October 25, 2018 was described as either "*Thursday, the FIRST DAY of winter, 2018*" (start condition) or "*Thursday, the LAST Thursday of October 2018*" (end condition).

A logistic regression on whether the date October 25 is chosen showed a significant interaction effect ($\chi^2(1) = 8.41$, $p = .004$). Specifically, when October 25 was manipulated to be a start temporal landmark, participants were more likely to choose it when they focused on the left side of the friendship card compared to those focused on the right side of the friendship card ($\chi^2(1) = 5.80$, $p = .02$). However, when October 25 was manipulated to be an end temporal landmark, participants were more marginally more likely to choose it when they focused on the right side than those focused on the left side ($\chi^2(1) = 3.61$, $p = .06$).

Our research extends the existing temporal landmark research on the start versus end temporal landmarks. We also enrich the temporal landmark literature by examining the impact of temporal landmarks on consumers' visual attention. Also, by highlighting differences between temporal landmarks that signal a start versus an end point, our research provides important implications for managers who should consider the selection of a proper point in time to promote their products.

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Beyond Nudging – Rethinking the Empowerment of Consumer Decision-Making

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EXTENDED ABSTRACT

Nudging as a choice architecture toolbox has seen immense popularity in public policy and marketing since Thaler and Sunstein's (2008) coining of the term. The promise of nudging is compelling: People's behavior can be predictably changed by minuscule alterations of the choice architecture, such as changing the default or colors on an online platform. Nudges are efficient, easy to implement, and effective (Reisch & Sunstein, 2016; Romero & Biswas, 2016). Several concerns have been raised regarding the deliberately vague definition of the term and the potential for the manipulation of individuals (Gigerenzer, 1991; Rebonato, 2012; Sunstein, 2015). Yet, what has not been the subject of discussion in academe is the context-specificity of nudging. There are certainly many situations where governments or businesses may nudge people to their own benefit and that of individuals. However, altruistic intentions cannot be presumed for all market actors (Nys & Engelen, 2017). We argue that the situation is hardly black and white and the discussion should proceed to a closer analysis of the context-specificity of choice architecture tools, leading to the elaboration of nudging alternatives. We suggest the development of "boosting", initially coined by Grüne-Yanoff and Hertwig (2016), as a consumer-centric complement to the choice architecture toolbox. The present paper conceptualizes the approach of consumer boosting by delineating it from the related concepts of nudging and education. Several major theories are drawn upon for a solid conceptual footing of the proposed framework. The authors aspire to thereby support the academic debate on measures targeting choice improvement. Through venturing into the mostly uncharted area between two long established fields, a new research agenda is outlined which is expected to realign the academic discussion on a constructive and progressive trajectory while at the same time generating significant potential for businesses and, most importantly, consumers.

Methodology

In line with MacInnis' (2011) work on conceptual marketing papers, a propositional inventory is established to then delineate the constructs of boosting, nudging, and education. Table 1 summarizes the major findings from the previously discussed research streams. It is apparent that while nudging and education interventions represent opposing extremes in several of the discussed dimensions, boosting finds itself somewhere in the middle. Noteworthy are for instance the cognitive and time effort required for the intervention to be effective as well as the ease of design and implementation.

The present paper proposes that there is a continuum between both paradigms in which nudge and educate are the extreme interventions and boost forms the middle ground (Figure 1). By virtue of a clear definition and delineation, intervention designers have the ability to choose the intervention that fits a specific context.

Consumer Boosting

As is elaborated more thoroughly in the full paper, consumer boosting retains its roots in bounded rationality and the Simple Heuristics school (Gigerenzer & Brighton, 2009; Simon, 1955, 1972). To ensure a solid footing in the field of marketing, it was enriched by the idea of co-creation (Lusch & Vargo, 2006; Vargo & Lusch, 2008, 2016)the value of service-dominant (S-D. The quality of choices is always an individually configured function of different preferences on an affective-cognitive continuum (Holbrook & Hirschman, 1982).

Hence, to give consumers the ability to co-create value, they need to be empowered to make better decisions along their customer journeys.

Through a selection of crucial definition elements from the seminal works on boosting, infused with a co-creative framing, the following definition was developed:

Consumer Boosting is the just-in-time intervention into individuals' choice processes that has the goal of improving context-relevant decision-making competences, resulting in superior choice quality as perceived by the intervention target.

Limitations & Research Agenda

This paper is a call for the elaboration and discussion of a concept new to marketing and consumer research. Hence, in its current stage the research program is marked by limitations which need to be further explored, three of which are mentioned here.

First, the propositions within this paper, including the definition, will need to be challenged. From debates about the validity of the underlying paradigms' connection to much more micro considerations such as the wording in the definition, a discussion will prove enormously helpful to the clarification of the construct as well as the advancement of related fields.

Second, empirical research will be required to validate the propositions. Experimental settings could discern whether boosting is effective in the suggested ways (increase in competences and emotional affordance). A comparison of intervention mechanisms in various settings could also be done experimentally.

Third, the operationalization of boosts will need to be discussed. Part of the attractiveness of nudging lies in it resembling a toolbox with concrete mechanisms. Boosting will need to go down a similar road to clearly demonstrate its applicability, a prerequisite for piquing interest within academe and practice.

Conclusion

The present work presents several important contributions to academe and practice.

The main academic contribution of this paper is the derivation of a conceptual footing and propositional inventory for further discussion of consumer-oriented choice intervention mechanisms, specifically boosting. Returning that discussion from its current, stagnant state back to a conceptual one allows for the elaboration of distinct, yet complementary research streams that enable a more holistic perspective on consumer decision-making. The complementary nature is especially reflected in the acknowledgement of context's relevance for the selection of intervention mechanisms and their blurry lines on the proposed affective–cognitive intervention continuum. Following the proposed research agenda should result in the significant progress of knowledge within an important consumer research area.

Practitioners will also benefit greatly from above developments. Consumer boosting provides the means to empower decision-making in a truly consumer-centric way which keeps their agency intact. This can either be the foundation for entirely new business models, such as online boosting sites that systematically help consumers make challenging decisions, for instance in financial services. Alternatively, it can be incorporated into existing strategies. Weighing business KPIs and consumer wants and needs, a selection guidance might prove to be a great help in bypassing the pitfalls of unbalanced nudge or education strategies.

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The Wise Use of Offensive Language in Advertising

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EXTENDED ABSTRACT

INTRODUCTION

Marketing in general and advertising in particular have been long criticized for their harmful role to society (Phillips 1997). However, recent trends underlie the importance of so-called "wisdom" where markets and marketing should have a deeper role in the society, notably in focusing more on value-creation and on building a sustainable future (Kadirov and Varey 2005). Advertising has been one of the strategies largely used by marketers to increase consumer welfare, with its important role of increasing awareness and informing (e.g., Jensen & Kesevan, 1993) as well as influencing intentions and behaviors (e.g., Jayawardhana, 2013). It is thus important to well understand underlying theories that can help the choice and implementation of different communication strategies. The objective of our paper is to test one communication strategy that can help raise awareness about the negative effects of homophobic language.

Individuals who identify themselves as LGBTG (lesbian, gay, bisexual, transgender and queer) often suffer different types of discrimination in our society, the most common type of discrimination being verbal harassment (NPR Robert Johnson Wood Foundation 2018). Verbal harassment can have serious effects on victimization and further on clinical depression, suicide ideation and suicide (Burton et al. 2013; Davis, Royne Stafford, and Pullig 2014; Huebner, Rebchook, and Kegeles 2004; Otis and Skinner 1996). Therefore, there is an urgent need for social marketing campaigns that raise awareness about the seriousness of verbal harassment.

From a theoretical perspective, we focus on the impact of the use of offensive language in advertisements on consumers. We decided to focus on offensive language because it was the root of our campaign (verbal harassment). Previous research has focused on different offensive advertisements by using the general term of "offensive" without focusing on a particular element that renders the advertisement offensive (Waller 1999; Christy 2006; Prendergast and Hwa 2017). Generally, consumers' reactions to offensive advertising is negative. Consumers perceive offensive advertisements as humiliating (Prendergast, Cheung, and West 2008), irritating and displeasing (Aaker and Bruzzone 1985), indecent (Boddewyn 1991), or against moral and social standards (Day 2005), with negative effects on company image and on purchase intentions (Ford et al. 2002).

Less focus, however was given to the presence of offensive words in advertisements, such as swearing words. One of the few papers to focus on this topic (Mortimer 2007) looked into some specific examples from industry and discussed the reasons why these companies decided to use swearing words. The authors suggest that the presence of swearing words can have positive effects in attracting attention, surprising or even lead to humor.

In three experimental studies we show that the use of offensive language, due to its unexpected effects lead to higher awareness of the topic and higher cognitive processing. We further prove the mediating role of perceived shock, as well as the moderating role of social norms. In study one, 53 French students (48.7% women, M_{age} =21.82, SD=3.85) were randomly exposed to either the target advertisement using offensive language or to the control advertisement, without the offensive word. Data analysis showed that our manipulation worked as participants exposed to the target advertisement indicated that the language used was less normal (M=2.43, SD=1.4, $t(51)$=3.68, p<.001) than did participants who were exposed to the control advertisement (M=3.74, SD=1.1). Furthermore, participants who were exposed to the offensive language agreed more that after seeing the advertisement they know more about how insults can hurt others

(M=5.07, SD=1.68, $t(48)$=1.90, p<.065) than those exposed to the advertisement without the offensive language (M=4.05, SD=2.15).

In study two, 101 UK adult citizens (83.8% women, M_{age}=33.87, SD=11.30) recruited from Prolific Academic platform were randomly exposed to either the target or the control advertisement and answered questions about the advertisement seen (notably, cognitive processing of the topic and perception of how shocking the advertisement was), about themselves and socio- demographics. T-tests revealed that our manipulation worked and participants exposed to the target advertisement perceived the language used to be less normal (M=2.08, SD=1.06, $t(99)$=3.57, p<.001) than did participants exposed to the control advertisement (M=2.90, SD=1.24). Further, the advertisement using offensive language was perceived to be more shocking (M=5.80, SD=1.25, $t(99)$=2.63, p<.02) than the advertisement without the offensive language (M=5.04, SD=1.64). Finally, the advertisement with offensive language led to higher cognitive processing (M=5.28, SD=1.59, $t(99)$=1.00, p<.04) than the advertisement without the offensive language (M=4.63, SD=1.54). Mediation analysis (Hayes, 2013, Model 4) indicated that the perception of the advertisement being shocking mediated the effect of the offensive language on cognitive processing (CI: .088 to .695; 10,000 bootstrap samples).

In study three, 181 US adult citizens (48.1% women, M_{ag} =33.87, SD=10.97) from Prolific Academic participated in our study against a small payment. We first replicated the results

obtained in study two. Further, simple slopes analysis (Hayes, 2013, Model 1) revealed that only participants who perceived the language of the advertisement to have violated the norms at a medium (M=2.99, β=.69, $t(177)$=2.62, p<.01) or at a high level (+1SD, M=4.35, β=.73, $t(177)$=1.99, p<.05) reported significantly higher cognitive processing after viewing the target advertisement versus the control one (for medium violation of norms: M_{target}=5.20, $M_{control}$=4.51; for high violation of norms: : M_{target}=4.83, $M_{control}$=4.11). Similarly, only participants who reported to have high standards of social norms in their environment (+1SD, M=3.99, β=.83, $t(177)$=2.36, p<.02) reported significantly higher cognitive processing after viewing the target advertisement versus the control one (M_{target}=5.38, $M_{control}$=4.55). Finally, only participants who reported to have low personal norms related to swearing words (-1SD, M=3.76, β=.67, $t(177)$=1.91, p<.06) reported marginally higher cog-

nitive processing after viewing the target advertisement versus the control one (M_{target}=5.42, $M_{control}$=4.75).

Our results show evidence that the use of offensive advertisements can have positive effects on the public, especially when used to support social causes. We build on previous literature on offensive advertising (Dahl, Frankenberger, and Manchanda 2003; Mortimer 2007) by showing that when supporting a cause, offensive language can be used to increase awareness and cognitive processing. We add to this literature by showing the mediating role of shock as well as the moderating roles of social norms.

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Give and You Shall Receive: The Effect of Prosocial Behavior on Financial Risk-Taking

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EXTENDED ABSTRACT

Consumer researchers have concentrated their efforts on antecedents of prosocial behavior (e.g., Duclos and Barasch 2014), while less is understood about consequences of prosociality. Prior work suggests that acting prosocially induces consumers with positive emotions (Dunn, Aknin, and Norton 2008) and these emotional responses increase choice share of affect-laden goods (Khan and Dhar 2006). In contrast, we explore how prosocial behavior affects financial decision-making. Our main contention is that following a prosocial behavior, consumers are more likely to take financial risk. Further, we propose that this greater propensity to take financial risk upon acting prosocially is driven by enhanced feelings of luck.

Why would prosocial behavior make people feel luckier? We reason that those who perform a self-sacrificial act (e.g., help others) non-consciously expect a self-serving return (e.g., increased status) from their act of service. While such expectation is generally related to reciprocation (Gouldner 1960), if a prosocial act is followed by a financial decision, we suggest people will apply this reciprocal expectation to a financial decision outcome, and expect a greater return from their investment. Given that luck is an integral part of financial decision-making that largely determines expected financial return (Cornell 2009), we measure expected financial return through feelings of luck. Accordingly, we predict that acting prosocially makes people feel luckier, leading them to take greater financial risk.

Considering that reciprocation from a prosocial act is expected from a random process (e.g., lottery, stock market) rather than a beneficiary, we predict that those who believe in karma will be more likely to feel lucky and take financial risk. The law of karma suggests that positive (negative) actions are coupled with positive (negative) future consequences (Reichenbach 1990). This external force is believed to control random outcomes (Kay, Moscovitch, and Laurin 2010). Thus, when a karma believer commits a good deed, they should expect good fortune. Supporting this argument, in Thailand, where beliefs in karma are high, lottery players often donate their lottery winnings to charity to increase luck (Pusaksrikit et al. 2018). This association between good karma and financial luck is likely robust and not limited to a specific region, as developmental psychologists suggest that karmic causal reasoning may be an innate predisposition (Banerjee and Bloom 2017).

We test our predictions across five studies. First, a pilot study measured financial risk-taking through the following scenario: "The stock market can be unpredictable, but higher risk leads to higher reward. What percentage of your personal savings would you hypothetically invest in the stock market?". Then, prosociality was assessed through a ten-item scale (alpha=.80), which measured frequency of helping actions (e.g., "How often have you given money to charity"; 1 = "Never", 5 = "Very often") (Rushton, Chrisjohn, and Fekken 1981). As expected, we found a significant positive correlation between prosociality and financial risk-taking after controlling for age, gender, and income ($r(249)$=.20, p=.002).

Study 1 examined whether a single prosocial act increases financial risk-taking. Participants answered questions to help a charity campaign, or performed no prosocial act. Then, they chose an investment strategy from five options of increasing risk. Those in the prosocial condition (M=4.06; SD=0.96) were more likely to choose a riskier strategy than those in the control condition (M=3.67; SD=0.99; $F(1,116)$=4.51, p=.036).

Study 2 replicated the effect with a financial risk involving real monetary consequences and showed mediation by feelings of luck. Participants wrote a story to help an ill child, or performed no prosocial act. Next, we offered a $0.40 bonus for participation and explained that any portion could be invested in a lottery with 10% (90%) chance of winning 10 times (losing) the investment. We next measured potential processes: "How lucky do you feel?", "To what extent did you enter the lottery because it seemed fun?", "To what extent did you enter the lottery because you wanted to indulge yourself?", and "How happy do you feel?". Those in the prosocial condition (M=0.23; SD=0.15) risked more money than those in the control condition (M=0.18; SD=0.13; $F(1,199)$=6.71, p=.010). This was mediated by feelings of luck (indirect effect = .019; 95% confidence interval=[.002, .042]). There were no differences in feelings of happiness ($F<1$) or perceptions of the lottery being fun or indulgent ($Fs<2$).

Study 3 tested the moderating role of belief in karma. Participants wrote about helping a charity, or about using a product. Next, we measured financial luck: "I am a lucky person" and "I am more likely to win money in a lottery than others". Lastly, we measured belief in the karmic doctrine: "To what extent do you believe in the phrase, you reap what you sow (positive actions lead to positive results/negative actions lead to negative results)?". A main effect of prosociality ($F(1,164)$=5.62, p=.019) and an interaction of prosociality X karmic belief ($t(162)$=2.55, p=.030) were found. For those with a belief in karma at or above 5.81 on the 7-point scale, performing a good-deed increased feelings of financial luck.

Finally, study 4 tested the interaction effect of karmic beliefs and prosocial behavior on financial risk-taking. Participants helped a student transition into college, or performed no prosocial act. Financial risk was then measured: "When you begin saving for retirement, what percentage of your savings do you plan to allocate to stocks (high risk/high reward), bonds (medium risk/medium reward), and cash (low risk/low reward)". To conclude, belief in karma was measured: "I believe in karma" and "Good actions in the present lead to good outcomes in the future either in this life or in the hereafter" (Kopalle, Lehmann, and and Farley 2010). A main effect of prosociality ($t(172)$=3.96, p=.048) and an interaction of prosociality X karmic belief ($t(170)$=2.26, p=.025) were found. Echoing the results from the previous study, for those with a belief in karma at or above 4.61 on the 7-point scale, performing a good deed increased financial risk-taking.

Together these studies reveal that performing a prosocial act increases financial risk-taking through karmic belief induced feelings of luck. These results offer both theoretical (e.g., post-prosocial behavioral consequences) and practical (e.g., belief systems and financial risk-taking) implications.

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Self-Concept Maintenance Strategies in Consumers' Online Response to a Boycott

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EXTENDED ABSTRACT

Consumer research typically employs the self-concept theory to explain the symbolism associated with the purchase, display, and use of brands (Mittal 2006; Thompson and Loveland 2015). Yet, there has been little empirical exploration of the relationship between self-concept and anti-consumption behaviors such as boycotting (Lee et al. 2009). Anti-consumption is as intertwined with the construction of self-concept as consumption (Gabriel and Lang 1995; Oyserman 2009). For instance, Sirgy (1982) noted that consumers may avoid or reject brands that are perceived as incongruent with or harmful to their self-concept. This study extends the self-concept theory to anti-consumption behavior by examining consumer boycott behaviors.

Participation in and encouragement of boycotts seem to be occurring with greater frequency online and are more visible on social media. Counter-responses have also become more observable on social media, which inherently facilitates these exchanges. This study specifically investigates how the psychological mechanisms of self-enhancement and self-protection aid self-concept maintenance by examining consumers' social media response to the boycott of an international retail brand.

Boycotting behavior may have a positive impact on a consumer's self-concept. Kozinets and Handelman (1998) found that boycotting allows people to express their individuality and present themselves as having differing values or outlooks from those consumers who support the target brand. Boycotting behavior is not always viewed as a self-enhancer. Yuksel (2013) pointed out that consumers may view boycotting behavior as a negative experience. It may be perceived as restricting their freedoms, with involvement producing "a sense of detachment" from their self-concept (Yuksel 2013, p. 210). As a result, the boycotting behavior is perceived as a self-threat (Sedikides 2012). A self-threat is the real or perceived challenge to people's positive evaluations of themselves (Leary et al. 2009) and usually results in psychological discomfort (Dunning 2007).

The self-concept can be thought of as the "theory" people hold about who they are physically, socially, and morally (Epstein 1973). To maintain a positive self-concept, people may use various self-enhancement and self-protection strategies. Hepper et al. (2010) identified four "families" of strategies, three linked to self-enhancement and one connected with self-protection. The strategies associated with self-enhancement are: (1) *favorable construals* which are thoughts about oneself that are characterized by an optimistic bias and upward social comparisons; (2) *positivity embracement* that involves seeking out positive feedback opportunities and making the most of desirable feedback; and (3) *self-affirming reflections* which are triggered by perceived self-threats and involve self-affirmations after the threat and social comparisons (Hepper et al. 2010). *Defensiveness* strategies correspond with the self-protection motive. They are triggered by a self-threat and involve preparing for and deflecting undesirable feedback (Hepper et al. 2010).

Hepper et al.'s (2010) classification of the strategies associated with self-enhancement and self-protection offers a good framework for understanding how self-concept maintenance may occur as consumers respond to the boycott of a brand. Consequently, this study asks:

RQ1: How, and to what extent, do assumptions about self-enhancement and self-protection motives explain the difference in response to a consumer boycott?

RQ2: What, if any, self-enhancement and self-protection strategies are evident in consumers' online boycott response?

RQ3: How do the boycott responses on social media relate to self-enhancement and self-protection strategies?

Using the netnographic approach, consumers' posts ($N = 81$) on the official public Facebook brand page for H&M were collected and analyzed. H&M was selected since it was undergoing a boycott during the study period (Bever 2018). Only boycott-related posts made on H&M's Facebook page by consumers within the first 30 days of the boycott call were collected and analyzed. Posts were selected using constructed week sampling (Hester and Dougall 2007) and then open-coded by the researcher and a second trained coder. Peer debriefing was used to maintain the credibility of the findings (Guba and Lincoln 1994; Harris, Pryor, and Adams 1997). Open coding helped define the types of boycott responses. A priori codes were also developed from Hepper et al.'s (2010) typology to identify self-concept maintenance strategies in each post. Since the strategies outlined by Hepper et al. (2010) were based on self-reports, the codes were adopted to make them applicable to the posts.

Among the Facebook posts sampled, two dominant responses were observed: (1) support for the boycott call and (2) opposition to the boycott call. Support of the boycott was communicated in numerous ways: (1) stating anti-consumption intention, (2) through emotions such as anger and outrage, (3) criticism of the brand and product quality, and (4) reveling in the brand and its affiliates' experience of adverse effects. Objection to the boycott was primarily expressed through counterarguments that: (1) defend the brand and rationalize the ad, (2) vilify the boycott's supporters, and (3) trivialize the boycott.

Three of the four self-concept maintenance strategies were observed in the sampled posts: defensiveness, self-affirming reflections, and positivity embracement. Defensiveness was indicated by discounting the boycott's legitimacy, denial of any wrongdoing by the brand, and derogation of boycott supporters. These actions were present in the posts that opposed the boycott and tended to be deployed by consumers to diminish negative psychological effects from a self-threat (Sedikides, 2012). Self-affirming reflections were evident in posts in supporting the boycott and were demonstrated when posts highlighted a personal characteristic that the user felt was positive. For example, one consumer emphasized his physical attractiveness in order to rebut the negative association in the H&M ad: "HOW am I a MONKEY I'm a HANDSOME MAN [sic]" (FB75). Self-affirming reflections was also visible when consumers distanced themselves from the brand by declaring their intention to no longer buy it, thereby re-affirming their values and morality. Positivity embracement was deployed by many users in the sample both in support of and objection to the boycott call. Positivity embracement corresponds with the self-enhancement motive but its presence in both responses suggest that the strategy might serve a self-protection motive as well. Together, these results demonstrate the presence of self-concept maintenance strategies in boycotting, an anti-consumption behavior.

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Who Will Upgrade to the Next Smartphone? An Integrative Deep Learning Model to Predict Upgrade Behavior of a Longitudinal Consumer Panel

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EXTENDED ABSTRACT

Every year companies line up at their conferences, trade shows, through press releases to announce their latest and greatest. They want their consumers to know that there is a new version of their product available. The idea is not only to generate sales through the acquisition of new customers, but to maintain current customers engaged with the brand, through upgrading opportunities. Upgraders are not necessarily replacing faulty devices, but shortening the lifespan of their functioning products (AppleInsider 2018). This manuscript is concerned with understanding why many consumers prematurely upgrade their products, leaving years of functionality on the table and, consequently, overspending.

The impetus to understand customer's adoption and diffusion of new products is established (Mahajan et al. 1995). However, upgrading products, a widespread behavior where consumers acquire an updated version of a product already in their possession, is less documented (e.g., Bellezza et al. 2017), much less comprehensively.

Given the lack of studies tackling the phenomenon in its entirety, we propose a comprehensive model of product upgrade, including personal differences, product characteristics, context and psychological processes. We tested our model on data gathered from a longitudinal consumer panel of iPhone and Samsung smartphone owners created specially for this research, with six rounds of data collection during one year (one wave of data collection every two months), consistent with the typical model update cycle of the industry. This data set provided us with natural occurrences of product upgrades (dependent variable) as well as individual characteristics (e.g., materialism, involvement with the category), product and usage characteristics (e.g., frequency of usage, hedonic value), context (e.g., news about the brand, buzz) and process measures (e.g., hedonic adaptation, desire to upgrade). We chose smartphones for their widespread adoption in the market and their relatively fast upgrade cycle. We enhance prior understanding by showing which variables are more relevant to predict which consumers will replace.

In the first round, our sample was of 730 American MTurkers. From these, 144 participants completed all rounds and were kept in the final sample. Product and usage characteristics, context, and process measures were assessed in all rounds. For data analysis, these longitudinal measures were operationalized though the difference between the rating in the first round and the rating in the round of the upgrade. Individual characteristics were distributed in different rounds. We summarized multi-item scales through factorial loads of the first PCA component. Because of requirements of the models, we one-hot encoded categorical data and standardized all variables.

We run two types of non-linear supervised Machine Learning models: a decision-tree model (eXtreme Gradient Boosting, hereafter XGB), and a Deep Learning (DL) neural network model. We chose these non-linear models because linear ones (e.g., logistic regression) would not have dealt with the inevitable non-linearity of at least one of our variables and with the multiple interactions in our dataset. To minimize the risk of lack of power due to a small sample, we estimated accuracy by applying a K-fold cross-validation (Trevor, Robert, and JH 2009). We randomly divided the sample into 10 folds of similar size. The models were fit on the first nine and vali-

dated on the last fold (70% of each fold for train and 30% for test). Thus, each model was estimated in 81 randomly selected training datasets and tested in 9 randomly selected datasets. In comparison to the XGB model (Accuracy = 0.932, AUC = 0.874, F1 = 0.727), performance of the DL model (Accuracy = 0.955, AUC = 0.979, F1 = 0.833) was better. Thus, we decided to adopt the DL model to deepen our understanding of the results. Next, we compared the performance indices of the DL model cited above (full DL model), composed by 39 variables, with those of the short DL model, composed by the 12 variables that presented a statistically significant correlation with the Upgrade dependent variable. The short DL model presented better performance indices (Accuracy = 0.977, AUC = 0.990, F1 = 0.889) than the full DL model. Despite the substantial sample attrition, our relative small sample provided consistent and accurate classifications of upgrade decisions.

We measured the importance of each variable to the model predictive power through the algorithm developed by Fisher et al. (2018). To be considered as "important", the exclusion of one variable should reduce its predictive capacity (Molnar 2019). Results indicate that the permuting of all 12 variables generated performance indices worse than those of the short DL model, suggesting that all these variables are relevant for explaining upgrade behavior.

The most important factor to contribute to an explanatory model of upgrading behavior was the importance consumers assigned to the resources and features of their current smartphone. As consumers in our sample believed the resources of their current smartphone were less and less important, the likelihood of upgrade increased. This finding is corroborated by other ownership variables as whether the product meets its owner's current needs and update capacity .

Other relevant variables are those concerning enjoyment. In all rounds, participants were asked to estimate how much they enjoyed their phones at purchase time and one month before answering time, how much they were currently enjoying and how much they would enjoy their phones in one month and one year into the future. The differential scores of these enjoyment measures were relevant predictors of the upgrade decision. Further, a decline in sentimental value, changes in mental book value, and news about both brands (iPhone Samsung) and about the brand of the smartphone the respondent owns also explain the upgrade behavior.

These variables explain product upgrade based on context, product characteristics, and their relation with their users through ownership and enjoyment. As time passes and new options are available, consumers perceive changes in functionality (importance of resources, whether it meets one's needs, update capacity) that are associated with changes in value perception (mental book value and sentimental value), which, in turn, are associated with changes in the enjoyment derived and expected from the device. Jointly, these factors comprise a parsimonious model that explains and predicts consumer upgrading behavior.

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Multitasking in Online Studies

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EXTENDED ABSTRACT

Consumer researchers conduct many experiments and surveys online. Between 2006 and 2014, approximately 15,000 papers referenced Amazon's Mechanical Turk (MTurk) (Chandler & Shapiro, 2016). Online tools have accelerated research by simplifying participant recruitment and data collection. However, as online research gives the researcher limited control over the study environment, researchers may wonder what else participants are doing during the study (Kraut et al., 2004; Skitka & Sargis, 2006).Researchers commonly assess participant attention using Instructional Manipulation Checks (IMCs) (Oppenheimer, Meyvis, & Davidenko, 2009). While IMCs may offer some insight into participant attention, they measure attention to the IMC itself, rather than to the elements of the study that are actually of interest to the researcher. Another undesirable feature of IMCs is that they can influence attention by encouraging systematic thinking (Hauser & Schwarz, 2015).

Researchers have access to another tool for measuring participant attention using the Page Visibility API (for technical details see Grigorik, Jain, and Mann 2018), which detects tab switching (see Permut, Fisher, & Oppenheimer, 2019 for a comparable tool). Measuring participant attention through page visibility offers several advantages over IMCs. Page visibility can be used throughout the study to measure attention to all key elements. Secondly, page visibility is measured unobtrusively and therefore, measuring it should not influence behavior. Page visibility creates continuous measures of attention providing a more complete picture of participant experience. The purpose of Experiment 1 was to establish a baseline measure of multitasking prevalence. 396 MTurk workers completed the study in exchange for a monetary payment. The study featured four sections: consent, instructions, experience, and measures. The experience portion involved playing a game for 10 minutes.

The majority (68%) of participants had at least one moment where the study tab became hidden. On average the study tab became hidden 2.9 times per participant and remained hidden for a total of 103 seconds. Multitasking was not uniformly spread across the study sections. Multitasking was significantly more common in the experience section (55% of participants), next most common in the instructions section (30%) and least common in the consent (14%), and measures sections (18%). Regressing the number of times the tab became hidden revealed significant effects of age and gender, with younger participants leaving the task more than older participants (β=-.06, t(393)=3.00, p=.002), and males (M=3.34) leaving the task more times than females (M=2.38; t(393)=1.96, p=.05).

The purpose of Experiment 2 was to replicate the findings of Experiment 1 and to test the impact of specific instructions deterring multitasking. The format of the experiment was very similar to Experiment 1. However, participants received the following new instructions "Do not attempt to complete other tasks at the same time as this study. If you cannot commit to focusing only on this task for 20 minutes, please do not accept the HIT." 444 MTurk workers completed the study in exchange for a monetary payment.

The instructions had a moderate impact on multitasking. While slightly lower than in Experiment 1, the majority (62%) of participants in Experiment 2 had at least one moment where the study tab became hidden. On average the study was hidden 2.1 times per participant and remained hidden for a total of 63 seconds. Again, multitasking was more common in the experience section (40% of participants) than in the instructions section (25%) or the consent (18%), and measures (18%) sections. Regression analysis on the number of times the tab became hidden again revealed significant effects of age and gender with younger participants leaving the task more than older participants (β=-.07, t(441)=4.74, p<.0001), and males (M=2.49) leaving the task more times than females (M=1.77; t(441)=2.02, p=.04).

Experiment 3 was based on the Elaboration Likelihood Model (Petty & Cacioppo, 1986). In this experiment, participants were shown one of two ads for a low-alcohol beer. One ad had strong arguments and weak peripheral cues while the other had weak arguments and strong peripheral cues. The ads were adapted from work by Andrews and Shimp (1990). It was predicted that participants who multitasked during ad exposure would be more positively influenced by the ad with strong peripheral cues while participants who did not multitask would be more positively influenced by the ad with strong arguments.

The study participants were 160 MTurk workers. There were 4 sections for which multitasking data was collected: consent, instructions, ad exposure, and measures. As part of the instructions section, participants completed scales rating their prior attitude toward low-alcohol beer. The key dependent measure was the difference between their attitude toward the advertised low-alcohol beer and their prior attitude toward low-alcohol beer in general. During the ad exposure, participants had to remain on that screen for 60 seconds before a button appeared allowing them to continue to the measures section.

A binary variable was created based on whether any visibility change occurred during ad exposure. Exactly half of the participants (80/160) showed evidence of multitasking during ad exposure. As predicted, a regression model analyzing the attitude difference measure revealed a significant interaction between ad type and multitasking (β=5.51, t(156)=2.49, p=.01). There was also a significant main effect of multitasking (β=-7.54, t(156)=2.17, p=.03). The main effect of ad type was not significant (β=-2.15, t(156)=1.39, p=.17). For participants who multitasked during ad exposure, ratings were higher for participants who saw the ad with strong peripheral cues (M=2.66) than for participants who saw the ad with strong arguments (M=-0.70). The opposite was true for participants who did not multitask during ad exposure, where ratings were lower for participants who saw the ad with strong peripheral cues (M=-0.62) than for participants who saw the ad with strong arguments (M=1.54).

Collectively, these preliminary findings highlight a significant issue for researchers. Multitasking is common among online study participants and significantly impacts responses. Fortunately, there is some good news here as well. While providing specific instructions to avoid multitasking only somewhat reduces incidence; measuring this behavior is relatively easy, unobtrusive, and can offer a detailed picture of if and when each participant appeared to be combining the study with other tasks.

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Is Science Good Storytelling?

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EXTENDED ABSTRACT

Over 35 years ago, Peter and Olson (1983) reversed an oft-asked question: Is marketing a science and posed the question "Is science marketing?" They conceptualized science within the framework of the marketing 4P's, where (1) theory represented product, (2) presentation and publications represented promotion, (3) the ease or difficulty of learning the theory and implementing empirical tests represented price (barrier), and (4) conferences, workshops, colloquia, and journal publications represented place/channels of distribution. The implication of their perspective is that scientific research and its acceptance was contingent on successful marketing of that work and was not a simple reflection of a good product (theory) that has received empirical support.

The use of narratives, rather than list- or argument-based messages that feature the marketing 4Ps, has become a popular and effective platform to create a successful marketing effort (e.g., Adaval and Wyer 1998). If we accept the Peter and Olson (1983) premise that (much of) science is marketing, then applying a narrative is a valuable approach for research to be successful. We believe the facets and processes evoked when reading a narrative may serve as a metaphor or heuristic to inform the implementation of consumer research.

Narrative Processes

We see a narrative as represented by two distinct processes: narrative construction (production) and narrative processing. Narrative construction is analogous to the creation of the research context and the narrative processing is analogous the participant's reaction to (or in) this context. Two forms of narrative appraisals result from the narrative processing: cognitive and emotional appraisals, which represent the response to the narrative content and narrative processing. The narrative and appraisal processes can inform the implementation of consumer research. We will first briefly review some relevant narrative processes and then discuss their application within the frame of research.

During the narrative construction process, authors (of research or narratives) identify narrative content and discourse factors (how to tell the story or frame the research context). Several discourse facets are relevant for consumer research: perspective (voice), completeness, and verisimilitude. Perspective and voice refer to the point-of-view used to present the narrative and the person telling the story (e.g., the narrator or character), respectively. Completeness refers to the extent of missing information in a narrative and the inferences needed to comprehend the narrative cause—effect relationships and the narrative meaning. Finally, verisimilitude represents the lifelikeness of the narrative (Bruner 1986).

During narrative processing, two mechanisms are evoked while reading a narrative – a deictic shift into the narrative and the creation of a mental representation of the story – resulting in two forms of narrative appraisal. Gerrig (1993) described a deictic shift as experiencing the narrative world and he developed the notion of being "transported" or "losing oneself in to the story-world." Bruner (1986) viewed a mental representation of a narrative as determined by time, space, intentionality (motive), cause-effect, and character, and proposed that narratives evoked a way of knowing distinct

from the logico-scientific (paradigmatic) tradition; with each having unique rules of evidence to determine quality and veracity. A narrative way of knowing uses verisimilitude (lifelikeness) and cohesiveness to evaluate the quality (truth-value) of the message. In contrast, the logico-scientific processing uses formal logic and mathematics to verify the truth value of statements (Bruner 1986). Consumer research relies much more on the former rather than the latter criteria for evaluation, as is evident by the value placed on studying "real people" making "real" decisions, or "real" behavior, or the importance of infusing experimental research with a level of realism (see discussions of mundane realism or external validity in the consumer research literature (Lynch 1999).

Narratives as a Perspective to Conduct Research

Narratives provide a metaphor or heuristic to guide the conduct of research. We view research as involving participants (characters), who are *motivated to act* toward some *goal* (either researcher imposed or naturalistic) via some *cause-effect* sequence (the underlying conceptual/theoretical model) that guide the participants' thoughts, feelings, or actions within a *chronological (temporal)* and *spatial* context. Research relies on the narrative criteria of coherence and verisimilitude to evaluate research, but use terms such as construct validity (coherence between the measures and the construct), internal validity (coherence of the underlying cause – effect model; that is, the absence of alternative causal agents), and external validity (verisimilitude – lifelikeness of findings).

Research, like narratives, evokes a mental construction of a story that includes temporal, spatial (contextual), character (participant) motivation, cause – effect, and goals facets. The heuristic value of applying a narrative to conduct research highlights several unseen (or at least unexamined) features which consumer researchers do not formally include in their work; for example, the role and effect of time on the underlying mechanisms examined. While researchers may consider temporal components of a study (e.g., primacy or recency effects), time is infrequently incorporated into theory (e.g., does the effect of X on Y happen on a second-by-second, a day-to-day, or week-to-week time scale?). In addition, the context in which the research is conducted is typically not considered. For example, artificial laboratory settings are assumed to be equivalent and not affect the replicability of empirical findings, although researchers often acknowledge the importance of context in the "limitations" section of a paper. In observational research, the naturalistic setting is a critical element of the empirical findings, but systematic evaluation of the effect of the context and a person by environment interaction is also neglected.

The narrative processes we discuss potentially expand the factors to include routinely in consumer behavior and marketing research. For example, when implementing a research project, the mental model constructed to comprehend a narrative highlight the importance of considering the research design from the perspective of the character (research participant) in order to (1) address the effect of time and context on the cause – effect mechanisms purported to influence the character's thoughts, feelings, or actions, and (2) consider the characters' (participants') motivation and goals in

the context of the research project. Random assignment, which is treated as the "magical" solution to create equivalent groups, does not resolve the effect of time and context on the purported causal mechanisms within each condition, the effect of the treatment on the characters' (participants') motivation and goals (which often remain unmeasured), or possible person x condition interactions.

Knowledge development and accrual from published research (or to borrow the conference theme – becoming wise) would benefit from efforts to enhance immersion into the research world, the participant's creation of a mental representation of the research, and the explicit inclusion of time and context in the research.

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Poverty, Consumption, and Counterintuitive Behavior

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EXTENDED ABSTRACT

The consumer behavior field has had a long history of looking at impoverished persons with low socioeconomic status and the circumstances within which they seek, acquire, and use goods and services. Over time, these investigations have moved from studies of domestic or U.S. subpopulations to global investigations at the base-of-the-pyramid. The underlying premise is that the poor desire the same cornucopia of products as their more affluent counterparts, seeking alternative ways to enter their material worlds. However, studies have suggested that consumers who live in relative poverty or below their societal consumption adequacy baseline may think and behave differently than other, more ordinary consumers. To consider one possible example, we examine healthful food choices by consumers in a typical participant pool compared to others who were living in an impoverished section of a major U.S. city. To gain a second comparison, another group of participants from the same pool was also selected to represent lower income individuals. The results show major differences among them, revealing insights about impoverished consumers as well as the value of sampling frames to study the poor.

Orienting Perspective

That poverty exists around the world is unquestioned. The 2016 *Human Development Report* reveals that, despite significant advances, universal poverty eradication is still far from a reality (UNDP 2016). Billions of people lack access to basic sanitation in their communities, and hundreds of millions are income poor, face chronic hunger, and lack functional literacy. This situation remains despite continued economic growth and development, with the most affluent 1% of the world amassing nearly 50% of global wealth and the poorest 50% of the world having less than 1% of global wealth. Even the situation in developed countries remains problematic. Additional data from the United States Census Bureau reveals that 12.3% of Americans live in poverty, and that nearly one-third of African American children under five are living in impoverished homes.

Early in the consumer behavior field's history, scholars like Andreasen (1975) looked at the intersection of race and poverty in the market. As time progressed, other subpopulations were also examined, including the homeless (Hill 1991), trailer park residents (Saatcioglu and Ozanne 2013), base-of-the-pyramid consumers (Viswanathan, Rosa, and Ruth 2010), and the global poor (Martin and Hill 2012). These investigations also looked at the vagaries of impoverishment from insufficient shelter, to marketplace empowerment, and to consumptive quality of life. This research area overlaps significantly with literature on consumer vulnerability (see Baker, Gentry, and Rittenburg 2005), and taken together they demonstrate that ways such individuals navigate the material world have nuances that defy typical models of consumer behavior. Consider Martin and Hill (2012) who studied how autonomy and relatedness to others as self-determination can ameliorate the impact of poverty on life satisfaction, however it only helps impoverished consumers if they have access to a modicum of basic goods and services defined to be "consumption adequacy."

Interestingly, a subsequent study by the same authors (Martin and Hill 2015) found that base-of-the-pyramid consumers who saved some portion of their incomes experienced a positive and significant rise in their overall well-being, while their developed nation counterparts did not. In fact, comparisons between the "poorest of the poor" in impoverished countries versus their counterparts in affluent locales revealed that saving behavior of the former was much greater than the latter. The authors opine that it may be a consequence of the downside risk of having nothing is much greater, potentially leading to catastrophic consequences, in places that are closer to subsistence living. Still, some scholars have suggested that the poor limit purchase behaviors to the most essential commodities (Vachani and Smith 2008), while others contend that purulent desires drive some of their consumption because of an inherent lack of self-discipline (Karnani 2007). The truth may unfold as researchers continue to move away from affluent socioeconomic classes to verify their consumer behavior models (Rapp and Hill 2015).

In total, this brief review indicates that many of the ordinary perspectives of consumer behavior that dominate the field are based on investigations of more affluent subpopulations, using a logic that fits their entitled views of the world rather than the distinctions surrounding impoverished existences. Researchers, therefore, may mistakenly use a single "lens" to look at *all* consumers under the assumption that possible differences are a matter of degree rather than kind. For example, Prahalad (2005) has been used to insinuate that the poor want and need the same things as the affluent, and good marketing must find sizes, packaging, and distribution strategies that make products available to them. To study the appropriateness of this lens, we consider a common belief that individuals of low socioeconomic status (Low SES) prefer low-cost, more calorically dense foods over more healthful options because of a lack of affordability of the latter.

We examine this scenario by varying the nutritional attributes associated with a common fast-food item, then we evaluate the price-health trade-offs that were made by participants. For comparison purposes, we collect data using a well-known participant pool yielding a set of results that are juxtaposed against a survey distributed in an impoverished section of a major U.S. city. A third dataset is also collected with the intent of gaining access to the lowest income respondents from the same well-known participant pool. Comparisons have implications for impoverished consumer behavior as well as the use of sampling frames to solicit their reactions.

Research Objectives, Method, and Results

Our research objective is to examine the differences between Low SES impoverished consumers and the general public in terms of food decision-making. Secondarily, we are also interested in the appropriateness of recruiting Low SES individuals from an online participant pool. For our purposes, we consider the following research directions:

Hypothesis: Impoverished consumers (Low SES) may behave differently compared with the general population.

Hypothesis: Different strategies for sampling impoverished consumers (Low SES) may produce distinct results.

Methodology

Two samples were constructed using two different sampling frames. The first sample employed Amazon's Mechanical Turk (MTurk-general) to recruit 89 participants 18 or older. In order to generate the second sample (Low SES), 51 participants ages 18 or older were also recruited through a director of an inner-city (Philadelphia, PA) organization whose mission is to reduce crime by changing the culture that produces violent behavior.

In order to estimate the value of healthier foods, both samples participated in the same discrete choice experiment, a technique also known as a choice-based conjoint study, using an internet platform provided by Conjoint.ly (Sydney, Australia). With this methodology, participants are asked to make a series of choices between items with various attributes and levels. As a result, the participants' choices more accurately reflect real world conditions compared with direct questionnaires (e.g., asking participants to explicitly state their willingness-to-pay for an item or ranking the importance of item attributes; see Louviere, Flynn, and Carson 2010). From the trade-offs made in these choice scenarios, the participant's preference for each attribute is estimated.

Since we are examining calorie preferences in a fast-food setting, a hamburger was selected as the item to study due to its ubiquity in such meals. In this choice experiment, participants were shown a picture of a hamburger and told "There are many different ways in which a hamburger can be made. The preparation method and cooking technique can change the nutritional content of the hamburger patty that is served. On the following screens you will be asked to make 10 choices between different burger options. All of the options come with the same bun and toppings. Please indicate which hamburger you would purchase." Participants were then given a series of ten choice sets between three different hamburgers. The three hamburgers varied according to the following attributes levels:

1. Price: three levels ($3.99, $4.99, and $5.99)
2. Protein: two levels (24g and 31g)
3. Calories: four levels (400, 500, 600, and 700)

Protein and Calories were selected to represent health attributes of the food. Calories were selected due to implementation of the Affordable Care Act that requires calorie labels for food items in larger fast-food chains. Protein was selected as a health measure because higher numbers typically are perceived as healthier, ceteris paribus, unlike calories where lower numbers typically represent a healthier option.

The set of ten choices is not an exhaustive list of all possible combinations of attributes. Rather, the attributes and levels for each choice set is selected by an algorithm in a fractional factorial design to optimize balance and overlap (https://conjoint.online/guides/conjoint-technical-notes/). After finishing the choice experiment, participants were asked demographic questions. These questions relate to age ("Which range below describes your current age?" [under 18, 18-25, 26-35, 36-45, 46-55, 56-65, over 65]), gender ("What is your gender?"), household size ("Including yourself, how many people live in your household?"), and household income ("Was your total household income [before taxes] greater than $42,000? note: Please count income from all members of your household, and from all sources").

Because we are asking participants to choose between options with different features, i.e., protein and calories at different price levels, we can infer average of the marginal willingness-to-pay (WTP) for different features. So, instead of directly asking "how much would you be willing to pay" for fewer calories or more protein, we measure marginal WTP indirectly through trade-offs a partici-

pant makes when choosing a hamburger. Specifically, we estimate marginal WTP as:

$$WTP_j = \frac{-V_j}{V_p}$$

Where WTP_j represents the marginal willingness to pay for a feature relative to a baseline, V_j represents the estimated marginal utility associated with a change in feature level, and V_p represents the estimated marginal utility associated with a change in price. In other words, marginal WTP represents the ratio of the estimated utility difference of two features (e.g., 700 calories vs. 600 calories) and the estimated utility of an additional dollar. Using this relationship, we can estimate each sample's WTP for 100 fewer calories in a hamburger.

Model

After the experimental results were collected, the likelihood of each option being chosen was analyzed using a Hierarchical Bayesian (HB) mixed logit model in SAS with Proc BChoice (SAS Institute Inc. 2016). Both fixed and random parameter estimates were used because the unit of analysis is each individual choice of every participant. This is due to the methodology where participants made multiple selections in the choice experiment, meaning we need to account for differences between individual preferences as well as the difference between options. As a result, we can write the equation of the utility each participant i obtains from alternative j in choice set t to be:

$$u_{ijt} = \beta x_{ijt} + \gamma_i z_{ijt} + \varepsilon_{ijt}$$

In this equation β represents the fixed effects parameter coefficients and is the fixed effect vector for participant i and alternative j in choice set t. Additionally, is the random effects parameter coefficient for participant i corresponding to , the random effects vector for participant i and alternative j in choice set t. The vector of errors is represented by . Under this framework, the selected choice is assumed to be the choice with the most utility to that individual in the choice set.

Each attribute level (price, protein, and calories) enters our model as a continuous variable at both the fixed and random effects levels. The default SAS prior distributions were used. Specifically the independent Normal priors for fixed effects had a mean of 0 and variance of 100. For random effects, an inverse Wishart prior distribution for the covariance matrix with 6 degrees of freedom and a scale of 6 was used. Two different models were estimated separately, one for each sample (MTurk-general and Low SES).

Results

Using a Gamerman Metropolis algorithm (Gamerman 1997), 50,000 burn-in samples were generated, then a simulation size of 50,000 was used to create posterior summaries for each sample. Estimates of fixed and random coefficients are shown in Table 1. With these estimates, we calculated the indirect measure of the average willingness to pay for healthier food features (see Figure 1; i.e., fewer calories and more protein).

Examining these results, we estimate that the average respondent from the Low SES sample is willing to pay approximately $3.30 more for 100 fewer calories and $2.90 for a hamburger with 31 g of protein (versus 24 g). Respondents from the MTurk-general sample were estimated to be willing to pay $0.72 more for 100 fewer calo-

ries and $1.00 more for a hamburger with 31 g of protein (versus 24 g).

Comparing the 95% credible intervals (see Figure 1), we find no overlap between the Low SES sample [$1.05, $8.62] and the MTurk sample [$0.48, $1.02] in terms of willingness-to-pay for 100 fewer calories in a hamburger. Specifically, we conclude that the Low SES sample is willing to pay more for fewer calories compared with the MTurk sample. Thus, we cannot be 95% certain of a difference between samples in the willingness to pay for more protein.

Post Hoc Study

In order to determine if results associated with Low SES can be approximated by individuals with lower income, a third sample was generated. This sample recruited 97 participants using MTurk in a manner similar to the study above with one change, only individuals whose MTurk accounts indicated income of less than $25,000 per year were eligible to participate. These participants (MTurk - Low Income) were given introductory instructions that "There are many different ways in which a hamburger can be made. The preparation method and cooking technique can change the nutritional content of the hamburger patty that is served." Then participants were given as set of 12 choices between three different hamburgers. The three again varied according to the following attributes levels:

1. Price: four levels ($3.99, $4.99, $5.99, and $6.99)
2. Protein: two levels (24g and 31g)
3. Calories: four levels (400, 500, 600, and 700)

After finishing with the choice experiment, participants were asked the same demographic questions as the previous two samples.

Modeling the likelihood of each choice following the method described above, we estimated that respondents from the MTurk – Low Income sample would be willing to pay $0.53 more for 100 fewer calories with a 95% credible interval of [$0.37, $0.91]. In addition, we estimated that the sample would be willing to pay $0.63 more for a hamburger with 31g of protein (versus 24g), with this credible interval [$0.37, $0.91]. As a result, we cannot be 95% certain that this sample differs from the MTurk-general sample in terms of willingness to pay for either fewer calories or more protein. Compared to the Low SES sample, there is no overlap in 95% credibility intervals for either attribute: protein or calories. So, on average, the Low SES participants are willing to pay more for both fewer calories and more protein compared with the MTurk – Low Income participants. In this situation, recruiting low income individuals through MTurk would be a poor substitute for our Low SES sample.

Sample Comparisons

Demographic questions were asked of each sample to explicitly compare characteristics of our Low SES sample and the MTurk – Low Income sample. Examining differences between samples, the Low SES group has the highest median age group (Low SES: 36-45 vs. MTurk – Low Income: 26-35) and the largest mean household size (Low SES: 3.35 vs. MTurk – Low Income: 2.01). The samples were similar along gender lines; 54% of Low SES respondents were female while 53% of the MTurk – Low income sample were female. Counterintuitively, the Low SES group reported the highest percentage of households with total income greater than $42,000. However, the larger household size could be a confounding influence on household income. So another measure of SES relating to geographic area in which the participant lives was examined.

In addition to their responses to these questions, participants' zip codes were also recorded and then used to look up the percentage of people in the area on the Supplemental Nutrition Assistance

Program (SNAP) program via the American FactFinder's Zip Code Tabulation Areas (https://factfinder.census.gov). Both income and household size are factors in eligibility for the SNAP program, with larger households having higher income thresholds for eligibility (https://www.fns.usda.gov/snap/eligibility). On average, in 2017, approximately 11.7% of the population participated in the SNAP program. Comparing our samples, we find the percentage of respondents living in an area where at least one in five people have participated in the SNAP program in the last year is highest for the Low SES sample (53% of the sample) and lowest in the MTurk – Low Income sample (22% of the sample). This disparity in neighborhood resources may point to a fundamental underlying difference between the two samples and act as a cautionary warning against using one group as a proxy for the other.

Discussion and Implications

Our results send several important signals for future research. For example, the original, general sample using MTurk shows that consumers recognize the value of more healthful food choices and are willing to pay more for them. As might be predicted, the Lower Income (MTurk) sample using the same participant pool revealed that they were still willing to pay for lower calories and higher protein. In contrast, the sample from an impoverished community (Low SES) that has a higher reliance on welfare programs for the poor was willing to pay significantly more than either other sample for fewer calories. This result is counterintuitive to much of the consumer behavior literature and some perspectives of impoverished consumers.

Returning to our research objectives, we find that the poor may be willing to pay *more* for ingredients that are associated with better eating habits, a behavior that seems antithetical to expectations based purely on the logic of affordability. In fact, the food choices of the poor, often selecting dense calories at fast-food restaurants that satiate hunger for the fewest dollars, would suggest otherwise. However, consistent with Martin and Hill (2012), impoverished consumers may actually be willing to pay *more* for product attributes that connote quality because they need to spend limited funds as wisely as possible. Our results seem to support this conclusion.

Finally, we note that MTurk, a way of gaining access to many samples beyond use of student subjects, may not be an appropriate sampling frame in the case of impoverished consumers. While low income may lead to poverty, the two are not necessarily synonymous. Thus, using low income groups recruited through MTurk may not be an appropriate substitution for low SES status.

It is important to note that this is a single study in a specific stated choice food context, so more research needs to be done to corroborate our findings. However, it appears credible that income alone may not be reflective of the lived experiences of consumers, especially if their backgrounds imply that they may have other resources at their disposal (e.g., students and the elderly). Consequently, we believe that consumer researchers interested in the poor may need to use different criteria and methods of accessing them and collecting relevant data, which may reveal interesting but unexpected findings.

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Social Identity-Based Barriers to Pro-Environmental Consumer Behavior

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EXTENDED ABSTRACT

The threat of climate change is a major social problem that requires immediate action across the world (Brown 1996). As such, it is crucial for consumer research to identify factors that promote and inhibit climate action, not just among environmentalists, but also among those who may seek to avoid such a social identity.

In this research, building on a growing body of research on environmentalist social identity (ESI; i.e., the extent to which one identifies with the environmentalist social category; e.g., Fielding and Hornsey 2016), we investigate whether ESI moderates the effect of the social observability of an environmental behavior on willingness to engage in that behavior. We propose that social observability reduces the pro-environmental intentions of consumers with low ESI (H1), as they are likely to be concerned with being associated with unwanted or incongruent social identities that are often associated with such behaviors (e.g., environmentalists for non-environmentalists, liberals for conservatives). That is, if they perform such behaviors, there is potential for others to misclassify them in undesirable social identities. Thus, we expect that categorization threat concerns will mediate our effects (H2). In addition, we predict that consumers with low ESI will be less likely to engage in future pro-environmental behaviors (i.e., negative spillover) as well when the initial environmental behavior is socially observable (vs. private) (H3). That is because associating one environmental behavior with unwanted social identities leads to associating other environmental behaviors with the same negative identities.

We conducted four studies to test our hypotheses. The first study tested H1 and H3. Ninety-one undergraduates first responded to a three-item ESI measure (e.g., "I identify with environmentalists). Then, they were told about a green purchasing program on campus where students who purchase green products in on-campus stores would be able receive rewards. In the socially observable (private) condition, the sweatshirt and mug rewards were green and read "Eco (name of university mascot)" (grey and only included the typical university logo and mascot). Next, participants responded to a 3-item measure of their willingness to participate in the green campus program (e.g., "How likely is it that you will participate in the Eco (university mascot) program?"). Finally, participants responded to a 20-item measure of future pro-environmental willingness (e.g., "I am willing to stop purchasing products from manufacturers or retailers that have poor environmental records").

The results revealed a significant simple effect of social observability among those low in ESI, such that they showed less pro-environmental willingness when the reward was socially observable (vs. private) ($p = .04$). However, the effect was not significant for those high in ESI. Next, a moderated mediation analysis showed that the pathway from social observability to future environmental willingness through initial environmental willingness was significantly negative for low ESI individuals (95% CI: -.38 to -.02), showing evidence of negative spillover. As expected, the effect was not significant for those high in ESI.

Study 2 again tested H1 and H3, this time controlling for political orientation and including a control condition. Two-hundred and forty MTurkers first responded to the same 3-item ESI measure as in the previous study. Then they were told about a volunteering opportunity with an environmental nonprofit organization, the Rainforest

Alliance, where they would send emails to potential donors. In the socially observable (private) condition, the organization would post their name and headshot on its website (would keep their participation anonymous). The control condition did not mention the social observability of their participation. Four items measured volunteering intentions (e.g., "How likely would you be to help the Rainforest Alliance?"). Subsequently, participants responded to the same 20 items from Study 1 and indicated their political orientation.

The results revealed that low ESI individuals showed less volunteering intentions in the socially observable (vs. control) condition ($p = .04$). Notably, there was no difference in volunteering intentions between the control and private conditions. In addition, there were no significant effects of social observability for those high in ESI. Finally, moderated mediation analyses provided more support for H3.

Study 3 sought to gain mediational support for categorization threat concerns (H2). One-hundred and forty-two undergraduates first responded to a three-item ESI measure (e.g., "I am similar to other environmentalists and have things in common with them"). Then they were told that they could donate money to help Greenpeace, an environmental nonprofit organization. Participants in the socially observable (private) condition were told that if they donated money, the organization would post their name, picture, and bio on its Facebook page (would keep their participation anonymous). Next, they indicated the amount of money that they would be willing to donate from $0 to $100. Finally, they responded to a 2-item measure of categorization threat concerns (e.g., "Donating to Greenpeace would be incongruent with my social image"). As expected, categorization threat concerns emerged as a marginally significant mediator in the relationship between social observability x ESI and donation amount (90% CI: -3.19 to -.02).

Study 4 was conducted to establish causality for the reported effects. One-hundred and ninety-one participants were randomly assigned to one condition of a 2 (socially observable vs. private) x 2 (high ESI vs. low ESI) between-subjects design. Participants in the high (low) ESI condition read the following prompt: "Please write about how being American is different from being Chinese (Swedish) in regards to concern for and care for the natural environment. For instance, are American or people in China (Sweden) generally more environmentally-friendly..." Note that Americans score much higher (lower) in environmentalism compared to Chinese (Swedish) people (Environmental Performance Index 2018). Next, participants in the socially observable (private) condition were instructed to imagine that they were out shopping at a store (online at home). Then, they indicated their WTP from $0-50 for an environmental activist shirt. Participants then responded to the same 3-item dispositional ESI measure as in the previous study.

An ANCOVA, controlling for dispositional ESI, showed that WTP was lower in the socially observable (vs. private) condition for those primed with a low ESI ($p = .05$). Similar to the previous studies, there was no difference in WTP for participants in the high ESI condition.

This work contributes to social identity research that shows consumers' behavioral intentions are often driven by the desire to avoid being associated with unwanted social identities (e.g., Berger and Rand 2008; White and Dahl 2007). We also contribute to research on ESI as we are the first to manipulate, rather than simply

measure, this construct. Finally, our research suggests that marketing practitioners should present pro-environmental behaviors in private or neutral (vs. socially observable) contexts in their messages to low ESI consumers.

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Reducing Monotony for Breakfast: A Goal-Based Account

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EXTENDED ABSTRACT

People around the world eat different foods at different times of the day. However, there is a common conception that individuals are more likely to repeatedly eat similar food for breakfast while looking for more variety at dinner. Prior research show that carryover habits are indeed stronger for breakfast than for lunch or dinner (Khare and Inman 2006). Khare and Inman suppose – but not test – that this effect is due to time scarcity such that people have more time to choose what to eat in the evening. Literature in variety-seeking throughout the day show mixed findings such that variety-seeking is lower in the afternoon (Roehm and Roehm 2004) or in the morning (Gullo et al. 2018), due to circadian variations in stimulation. Our research differ in two ways. First, our explanation is based on utilitarian vs. hedonic goals, rather than time scarcity and body temperature. Second, we examine the moderating rather than mediating role of hedonic goals on the relationship between time of the day and variety-seeking. In other words, we examine the impact of a change in hedonic goal on variety-seeking over time and we show that it is higher for breakfast than for lunch than for dinner.

Consistent with previous literature, we posit that variety-seeking over time (throughout the week) will be lower for breakfast than for lunch than for dinner (across day). Building on the literature on hedonic consumption and goals, our central prediction considers the interplay between hedonic goals and meals. We theorize that the impact of a change in hedonic goals on variety-seeking over time is decreasing from breakfast to dinner.

In studies 1A (USA) and 1B (France), we use longitudinal food consumption data for panel members over one week and three meals per day. We know exactly what combination of food items was consumed for each meal. We used the data at the day level so that we have seven observations for each meal of each panel member. Monotony in choice is equal to the number of times the specific consumption (combination of different food items) on day d has been consumed on other days of the week, for meal m of individual i. Variety was computed as the opposite of monotony and ranges from 1 = no variety over time to 7 = perfect variety over time. Using multilevel mixed-effects regressions, we find that variety-seeking over time is lower for breakfast than for lunch than for dinner. To test our main prediction, we examine the influence of a proxy for hedonic goals (week vs. weekend). Consistent with our theory, we find that the increase in variety-seeking over time in the weekend is stronger for breakfast than for lunch than for dinner (see Table 1).

Study 2 used an event reconstruction method or ERM (Schwarz, Kahneman, and Xu 2009), adapted from the day reconstruction method or DRM (Kahneman et al. 2004). We asked participants on a Tuesday to recall eating episodes for the last two days: Monday (weekday) and Sunday (weekend). Participants rated each meal episode on perceived utilitarian vs. hedonic goal, as well as recalled variety-seeking over time by indicating how many times they had eaten the given combination of food items in the past seven days. Using multilevel mixed-effects linear regressions, we find a similar interaction such that the simple effect of hedonic goals on variety-seeking over time is greater for breakfast (β=.31) than for lunch (β=.13) than for dinner (β=.04), see Table 1.

In study 3, we test our theory by asking respondents in a goal intervention group (vs. control) to increase their hedonic goal by one unit. Following the goal intervention, participants were asked to describe what they were planning to eat for different meals on the next day. We measured variety-seeking over time by asking whether participants had eaten the planned meal in the past week. Using multilevel mixed-effects logistic regression, we find that simple effect of hedonic goals on variety-seeking over time is greater for breakfast (OR=5.93) than for lunch (OR=3.60) than for dinner (OR=1.59), see Table 1.

Across four studies, we find that the impact of hedonic change on variety-seeking over time (throughout the week) decreases from breakfast to dinner (across day). This result is particularly relevant since marketers seem to position breakfast as a purely utilitarian meal compared to lunch and dinner. A follow-up study of half a million restaurant menu items show that breakfast foods are less likely to be described with hedonic words. While promoting the utilitarian benefits of breakfast foods may be effective to boost sales of the existing products, it may be detrimental to encouraging trials of new goods. Our result underscore actionable insights for marketers as to which meals may show greater variety-seeking potential due to a change in hedonic positioning.

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Can Marriage Help the Environment?
Sustainable Consumption in Romantic Relationships

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EXTENDED ABSTRACT

With the increasing number of natural disasters along with rising global temperature (Cramer et al. 2014), most people agree that the world is threatened by environmental problems (Trudel 2019). Consequently, researchers have investigated the drivers behind sustainable consumption (Groening, Sarkis and Zhu 2018; White, Habib and Hardisty 2019) and have argued that social influence is one of the important factors in promoting sustainable behavior (Goldstein, Cialdini and Griskevicius 2008; White et al. 2019). Many studies examine how the social influence of a stranger (Goldstein et al. 2008), or an out-group member (White, Simpson, and Argo 2014) or a friend (Meijers et al. 2018) influence one's sustainable behavior. However, previous research has not examined whether and how, in a romantic relationship context, partners' (un)sustainable behaviors influence each other. In this research, we demonstrate that in the context of a romantic relationship power plays a key role in determining whether and how one's sustainable behavior will be influenced by the behavior of one's partner.

The conceptual background of this research is built upon the literatures on social influence on sustainable consumption (Goldstein, Cialdini and Griskevicius 2008; White et al. 2019), close relationships in consumer behavior (Dzhogleva and Lamberton 2014; Cavanaugh 2016), and relationship power (Laurin et al. 2016; Brick et al. 2017). The sustainable consumption literature reveals mixed findings regarding how others' behaviors influence one's sustainable behavior. On one hand, the literature has revealed a vicarious moral-balancing effect (Kouchaki 2011; Gino and Galinsky 2012; Meijers et al. 2018), which demonstrates that others' sustainable consumption choices might give one license to engage in unsustainable consumption (Meijers et al. 2018). On the other hand, researchers argue that others' sustainable behaviors might lead one to behave consistently and engage in sustainable consumption (Goldstein et al. 2008; Griskevicius et al. 2012).

In this study, we propose that in a romantic relationship context, relationship power will influence whether and how one's sustainable behavior will be affected by their partner's behavior. Individuals with low relationship power are more likely to center their goals on their partners' (Laurin et al. 2016) and to conform to their partner's brand choices (Brick et al. 2017). Furthermore, low power is associated with greater focus on others, which leads consumers to incorporate others' behaviors in their decision-making (Rucker, Galinsky, and Dubois 2012). Therefore, we predict that low relationship-power consumers will behave consistently with their partner's (un)sustainable choices. Conversely, high-power individuals are more likely to focus on the self (Rucker et al. 2012), less likely to conform to others (Mourali and Yang 2013), and more likely to resist the identity that their partners may seek to impose on them (Cast 2003). Therefore, we predict that consumers with high relationship power will engage in similar levels of sustainable consumption after being exposed to their partner's sustainable or unsustainable behaviors.

Study 1 used a 2 (partner's behavior: sustainable, unsustainable) between-subject design with relationship power as a second continuously measured factor. We recruited 269 married participants and asked them to read about their partner's sustainable or unsustainable purchase. Next, participants were presented eight choice pairs of sustainable and conventional products. A multiple regression analysis demonstrated a significant interaction of relationship power and partner's behavior (β=.32, SE=.37, t(250)=2.02, p=.04). Floodlight analysis indicated that the JN value was 2.81, or 2.31 SDs below the mean, showing that participants with low relationship power were more likely to buy sustainable products after exposure to their partner's sustainable than unsustainable choices (t=-1.96, p=.05), while the difference between the sustainable and unsustainable conditions was not significantly different above 2.81.

In Study 2, we manipulated (rather than measure) relationship power. We used a 2 (relationship power: high x low) x 2 (partner's behavior: sustainable, unsustainable) between-subjects design. A two-way ANOVA revealed a significant interaction of partner's behavior x relationship power on participants' sustainable choices (F(1,403)=9.07, p=.003, η_p^2=.022). Those in the low-power condition were more likely to choose sustainable products after being exposed to their partner's sustainable than unsustainable choices ($M_{sustainable}$=4.86, SD=2.37, $M_{unsustainable}$=3.97, SD=2.47, F(1,403) = 6.83, p=.01), while for those in the high-power condition there was no difference between the sustainable and unsustainable conditions ($M_{sustainable}$=4.30, SD=2.42, $M_{unsustainable}$=4.86, SD=2.43, F(1,403)=2.71, p=.101).

Study 3 extends the findings by adding a control condition and applying a different manipulation of partner's behavior. We used a 3 (partner's behavior: sustainable or unsustainable behavior, control) x 2 (relationship power: high, low) between-subjects design. The results revealed a significant interaction of partner's behavior x relationship power on participants' sustainable consumption (F(2,362)=5.96, p=.003, η_p^2=.032). In the low-power condition, participants indicated greater likelihood of engaging in sustainable consumption after exposure to their partner's sustainable than unsustainable behavior ($M_{sustainable}$=3.31, SD=1.45 vs. $M_{unsustainable}$=2.45, SD=1.31 F(1,362)=13.63, p<.0001). Participants with low relationship power indicated lower preference for organic products after being exposed to their partner's unsustainable consumption than those in the control condition ($M_{control}$=3.02, SD=1.67, F(1,362)=4.81, p=.03). The difference between the sustainable and control conditions was not significant for low-power participants. In the high-power condition, participants exposed to their partner's unsustainable behaviors engaged in more sustainable consumption after than those in the control condition ($M_{unsustainable}$=3.35, SD=1.46 vs. $M_{control}$=2.80, SD=1.63, F(1,362)=3.42, p=.06). The differences between the sustainable ($M_{sustainable}$=2.99, SD=1.47) and unsustainable conditions (F(1, 362)=1.53, p=.21), as well as the sustainable and control conditions (F(1,362)=.4 p=.51), were not significant.

The results demonstrate participants with low power in relationships tend to behave consistently with their partner's choices. They are more likely to engage in unsustainable consumption after being exposed to their partner's unsustainable choices; however, their partner's sustainable behavior does not influence them to behave more sustainably. Partners with high-power are not influenced by their partner's sustainable versus unsustainable choices but they increase their sustainable consumption after being exposed to their partner's unsustainable behavior relative to their baseline tendencies. This can be attributed to the assumption that power leads to a sense of re-

sponsibility (Scholl et al. 2018), which might lead high relationship power consumers to feel responsible for their partner's unsustainable choices. These findings provide novel insights into the social influence effects on sustainable consumption in romantic relationships.

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Brands are the Right Choice: Political Ideology and Brand Centricity

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EXTENDED ABSTRACT

Brands, as essential as they are to companies, are beginning to lose their power in the eyes of consumers. Increasing number of alternatives, aggressive price competition and unlimited online resources negatively affect brands' influence on consumers. Consequentially, it is becoming increasingly important to understand whose lives center more or less around brands. In this research, we examine consumer brand centricity (Fischer, Volckner, and Sattler 2010; Puligadda, Ross, and Grewal 2012) through the lens of political ideology.

Political ideology, particularly whether individuals hold conservative or liberal ideology, strongly shapes consumers' attitudes and intentions in the marketplace (Crockett and Pendarvis 2017). Even though political ideology has always been one of the central elements of consumer identity, lately its relevance has increased significantly (Westwood et al. 2018). Yet, many questions on the effects of political ideology on marketing still remained unanswered (Jost 2017). This research examines how consumers' level of brand centricity can be determined by their conservative versus liberal ideology. We argue that consumers who hold a more conservative ideology would be more brand centric than the ones who hold a more liberal ideology. This is because, brands, through their identity signals, would enable conservatives (vs. liberals) to make inferences about other individuals based on their dispositions.

We test our propositions in four studies. In Study 1 (n: 50), we first asked participants their political ideology and then used a ten-item ($\alpha = .91$) scale (Puligadda et al. 2012) to directly measure their brand centricity. We regressed the brand centricity scale on political ideology index. As expected, conservative (vs. liberal) political ideology predicted brand centricity ($b = -.29$, $t = -2.13$, $p = .038$).

For Study 2, 103 Amazon Mturk workers were first asked to indicate their political ideology. Afterwards, they were asked to rank sixteen different product options based on their likelihood of purchase. All options presented consisted of evenly distributed combinations of four different attributes (brand name, price, picture quality, warranty) across two levels (Sony vs. TCL; $570 vs. $460, 8.5/10 vs.7.9/10; 1 vs. 3 year). Our goal was to see whether conservatives would rank the options that include the more (i.e. Sony) vs. less (i.e. TCL) favorable brand name higher. To test our predictions, we created a dependent measure which consisted of all eight product options that included the Sony (vs. TCL) brand and regressed the political ideology index on dependent measure. We controlled for familiarity towards the Sony and TCL brands. As expected, the political ideology index was a significant indicator for the dependent measure ($b = .19$, $t = 2.22$, $p = .029$). Results replicated when we controlled for indicators of participants' socio-economic status ($b = .19$, $t = 2.19$, $p = .030$).

In Study 3 (n: 168), our goal was to explore a boundary condition to shed light on the underlying mechanism. If conservatives' tendency to be more brand centric would be rooted in their inclination to make dispositional inferences, then nudging conservatives towards relying less on dispositional inferences should make them less brand centric. To test this, participants were first asked to complete the political ideology measure followed by dispositional/situational inference manipulation. In the situational inference condition, participants were primed to think that the differences among people are externally driven. In the dispositional inference condition, partici-pants were primed to think that differences among people are internally driven. Afterwards, participants were asked to image that they could win a gift for completing the study, but we first asked them to view a review for each of the two options. For one of them, the review mentioned the brand, while for the other, it mentioned product features instead. We predicted that conservatives would choose the gift that had the review in which the brand name (vs. product feature) was mentioned, but only under the dispositional inference condition.

Results yielded a significant main effect of political ideology ($b = .37$ $z = 1.74$, $p = .053$) on choice such that conservatives (vs. liberals), overall, chose the review that mentioned the brand as opposed to product features. This main effect was qualified by a significant interaction between the political ideology and inference manipulation ($b = -.85$, $z = -2.24$, $p = .025$). As expected, under the dispositional inference condition, conservatives (63%), compared to liberals (30%), were more likely to choose the gift in which the reviews mentioned the brand vs. product features ($b = .78$ $z = 2.64$, $p = .008$). However, under the situational inference condition, both conservatives (38%) and liberals (42%) were less likely to choose the option that highlighted the brand vs. product feature ($b = -.07$, $z = -.31$, $p = .75$). Controlling for participants' level of materialism, how much they care about quality and socio-economic indicators did not affect the significance our results.

In Study 4, we relied on Google search data to assess the relationship between conservative ideology and brand centricity. For this study, we examined Google Shopping searches for the use of the term: "brand" in the period between 16.07.2008 and 16.07.2018 and extracted a volume score for each of the 50 US states (www.google.com/trends). To gauge conservative vs. liberal ideology, we used Gallup metrics to rank each state's conservative standing. We predicted that conservative states would use the keyword "brand" more than liberals when shopping online. In order to test this prediction, we regressed the search volume of the term "brand" on conservative standing of each state. As expected, conservative standing significantly predicted the search volume of the term "brand" ($b = .55$, $t = 4.65$, $p = .00$). Results replicated our focal findings when we controlled for GDP per state, income per capita, and population density and median age ($b = .39$, $t = 2.34$, $p = .023$).

This research demonstrates that brands are more central for conservatives than liberals because conservatives are more likely to rely on dispositional inferences. We document these effects through experiments and using secondary data. Across studies, we control for potential confounds including socio-economic indicators, materialism, and importance consumers give to product quality.

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The Appeal of Upcycled Products: The Role of Perceived Creativity

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EXTENDED ABSTRACT

Upcycled products are the result of the transformation of old, used, or unwanted products into new ones; for example, using old snowboards to make a bench. Although upcycling is becoming increasingly popular, our understanding about why consumers find upcycling products appealing is limited. Initial research suggests that the primary benefit that consumers seek when purchasing an upcycled product is sustainability (Wilson 2016). Upcycling is considered even more sustainable than recycling, because it reuses waste without decomposing it to the raw material, which involves considerably lower energy and resources consumption (Braungart et al. 2007; Zink et al. 2014).

In this paper, we propose an alternative mechanism that can help explain the appeal of upcycled products – creativity. In particular, we suggest that the appeal of upcycled products lies in the distance between the functions of the old product (i.e. input) and the new product (i.e. output). We hypothesize that the more distant the functions between input and output are, the more creative consumers should perceive an upcycled product. This increased sense of creativity should, in turn, explain the increased appeal of upcycled products. For example, consumers would perceive a bench made out of old snowboards (high distance input/output) more creative and appealing than a bench made out of old chairs (low distance input/output), since they would have less likely thought of a snowboard as a solid support to sit down as they would have of a chair. Our theorizing resonates with extant research on creativity, which suggests that the combination of concepts that belong to different domains can generate novel and original ideas (Dahl and Moreau 2002; Ward 2004).

We tested our idea in six studies. In Study 1, we first tested whether the appeal of upcycled products lies in higher creativity perceptions. We coded 2,008 consumers´ reviews of upcycled and comparable non-upcycled products in terms of product associations, including creativity and sustainability. A chi-square test revealed that, compared to non-upcycled products, consumers associated upcycled products more often with creativity ($X^2(1, N_{codes}=4,026) = 66.968, p = .000$). In addition, creativity was mentioned in 76% of the reviews of upcycled products, whereas sustainability only in 16%. These results suggest that it is mainly creativity that distinguishes upcycled products from non-upcycled ones in the eyes of consumers.

In Study 2 (N=532), we aimed at better understanding why consumers associate upcycled products with higher perceived creativity. We asked half of the participants to rate 130 upcycled products in terms of their appeal on a five star rating scale, and the other half to evaluate the same products in terms of distance between input and output functions and creativity. A linear regression analysis on the 130 products showed that upcycled products were perceived as more appealing when the distance was greater ($t(128) = 2.411, p = .017$). A mediation analysis showed that the effect of distance on appeal was driven by the perceived product creativity ($b = .119; SE = .055; CI_{95\%}[.024, .240]$).

In Study 3, we randomly assigned participants (N=363) to one of three between-subjects conditions where we experimentally manipulated distance between input and output. In the *high distance* condition, the function of the input was different from that of the output (e.g., table made with pieces of wood from a whiskey barrel); in the *low distance* condition, the functions were very similar (e.g., table made with pieces of wood from another table); in the *control* condition, the product was non-upcycled (e.g., table made with pieces of wood). Next, participants rated appeal and creativity of three product replicates. An ANOVA revealed that participants evaluated products in the high distance condition as more appealing than products in the low distance ($t(362) = .308, p = .002$) and control ($t(362) = .233, p = .018$) conditions. A mediation analysis showed that perceived creativity mediated the effect of distance on appeal ($b = .182, SE = .041, CI_{95\%} [.103, .262]$).

In Study 4 (N=120), we aimed to show that distance between input and output functionalities also affects the actual demand for upcycled products. We set up a small stand with the aim to sell upcycled keychains. Potential buyers had the possibility to buy a keychain made repurposing the fabric of parachutes (*high distance*) or a similar keychain made repurposing the fabric of other keychains (*low distance*). Consumers purchased more keychains when the distance between input and output was greater (68.3% vs. 31.7%; $z = 4.016, p = .000$).

In Study 5a and 5b, we provided further process evidence using moderation. If creativity underlies the observed effect on product appeal, we would expect that consumers low in openness to experience should less appreciate the creativity and therefore the appeal of upcycled products. Openness to experience is indeed conceptually related to the appreciation of creative ideas, such as art, music or literature (John and Srivastava 1999). In Study 5a, participants (N=224) rated the appeal of products randomly taken from a *high distance, low distance* or *control* condition and self-reported their level of openness to experience (John and Srivastava 1999). A moderation analysis showed that the effect of distance on product appeal was reduced when participants were less open to experience ($b = .288, SE = .067, CI_{95\%} [0.156, 0.420]$). In Study 5b, we tested the same moderating effect by manipulating openness to experience.

This research makes several contributions. First, this paper offers a novel account for why consumers like upcycled products. Whereas extant literature suggests that the appeal of upcycled products is rooted in sustainability, our studies identify perceived creativity as a main driver of their appeal. Second, our paper contributes to a better understanding of how creativity perceptions are formed. While extant research has focused on explaining what makes ideas creative, research has paid little attention what drives creativity perceptions (Anderson et al. 2014; Zhou et al. 2019). Understanding how consumers perceive creativity is relevant, as it predicts their behavioral intentions. Finally, this research offers useful practical insights to marketers to enhance the appeal of upcycled products and therefore promote sustainable products.

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Diversity Delusion in Fashion Industry

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EXTENDED ABSTRACT

Women, who have been the center of fashion (Barnard 2002), internalize what fashion industry communicates and often measure their self-worth with the socially constructed ideals of beauty (Polivy and Herman 2004). In a fashion scene dominated by Caucasian looks, the idea of ideal beauty becomes even more substantial for women from different ethnic, racial, religious, or cultural backgrounds and women in different age groups, socioeconomic classes, and physical abilities, to name a few. As such, investigating the fashion consumption experiences of diverse women, the social and psychological consequences of underrepresentation, and the perspectives of fashion producers on diversity becomes crucial. Therefore, this study shows the global conversation on diversity in fashion industry and the perception gap between producers and consumers on what diversity entails.

The underlying meaning of diversity in fashion industry has been incredibly limited compared to other fields in the business world. For instance, over the years, it is interesting to see that the most prominent measure of diversity for industry professionals has been the skin color, especially whiteness versus blackness (Fashion Spot 2017). Similarly, the limited literature on diversity in fashion (e.g., Mcdermott and Pettijohn 2011; Mears 2010) predominantly focus on whiteness versus blackness in model selection. Studies on the experiences of women from other races and ethnicities such as Asians, Hispanics, Indians, and Hawaiian and other Pacific Islanders are scarce. Additionally, the literature on body and physique mainly discusses the representation of ultra-thin and the plus-size female images (e.g., Christel 2014; Shin 2013;) by ignoring other body types and sizes such as petite, in-between sizes, and voluptuous or curvy. Since a holistic study has not been conducted before regarding the perception differences of fashion producers and consumers on what diversity is, investigating the fashion consumption experiences of a divergent group of woman and the understanding of diversity from the perspective of industry agents become crucial for both consumer research field and marketing professionals.

Since research on issues such as race, ethnicity, gender, religion, physical ability, or appearance are defined as socially sensitive topics, which have the potential to impact all people who are involved in it by being intimate, discreditable, or incriminating (Renzetti and Lee 1993, qualitative methods, exploring the experiences and subterranean feelings of individuals, were suitable for our study (Liamputtong 2007). We conducted semi-structured, open-ended, in-depth interviews with 38 women from diverse racial and ethnical backgrounds from various cultural environments with different body shapes and sizes and with 18 fashion producers to obtain rich insight and thorough understanding of the present phenomenon (Cherrier and Murray 2007).

Since familiarity is needed with the data set, our analysis started with open coding (Weber 1990), which enabled us to break down a significant amount of raw text into first-level concepts and categories. Grouped data presented both patterns and irregularities between respondents (Silverman 2005). To achieve a reliable analysis after defining the categories and sub-categories as suggested by Riffe et al. (2005), we identified core themes by using selective coding.

This study demonstrates that the meaning of "diversity" in fashion is trapped between the discussions of white versus black, skinny versus plus size, young versus old, revealing versus conservative clothing, female versus male, and disabled versus non-disabled. The industry is still recognizing the old standards, mostly Caucasian, as the ideal beauty and try to be "politically" diverse by including a limited number of women from the trending categories mentioned above. However, the concept of beauty itself holds such a confining power that women tie their inner peace and self-worth to their appearance. While more representation and visibility in the mainstream fashion media takes the pressure off from the women of color to a certain degree, underrepresentation causes a devaluation of self. This underrepresentation cultivates the feeling of being different and the belief of deserving to be an outsider. Therefore, women who belong to the underserved and underrepresented demographics experience a significant burden due to the lack of diversity.

The significant theoretical contribution of this research is the revelation of a perception gap between fashion producers and consumers regarding what diversity means, as well as the extension of the types of diversity that were previously ignored in the scholarly debates. We expand the underrepresented categories to skin color other than black and white, average "in-between" size, height, flaws and imperfections, pregnancy and post-partum, and budget that are considered discriminative by female fashion consumers. We discuss the problems associated with the industry's assumption that fashion becomes aspirational and admirable because it is ultimately unattainable.

Consequently, by investigating the experiences and representation of women in fashion industry, we shed light on the importance of diversity in fashion and redefine the scope of what diversity is. Through this research, we hope to trigger new ideas that can help reshape fashion, production, and communication by refraining from practices that lead to the exclusion of specific groups of women through discrimination, isolation, and segregation.

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The Ugly Luxury Premium: When Distinctiveness Pays Off

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EXTENDED ABSTRACT

The more attractive something is the more people like and choose it (Townsend and Shu 2010; Veryzer and Hutchinson 1998). This is particularly true with fashion which is publicly consumed and evaluated by others (Calder and Burkrant 1977; Ratner and Kahn 2002). Yet, as has occurred before, distinctively ugly luxury goods are selling well (Givhan 2018). Given luxury fashion is purchased in order to signal something positive about the wearer, it is surprising that luxury brands are successfully selling "awkward shapes, huge silhouettes, clumpy shoes, and odd headwear" (*Financial Times*, Stoppard 2017).

Consumers purchase luxury largely to signal prestige or wealth to others (Grossman and Shapiro 1988). For this signal to operate, it must be noticed and identified as luxurious (Bearden and Etzel 1982; Berger and Ward 2010). We hypothesize that ugliness helps luxury signal, but only when it is *distinctively* (meaning eye-catching or non-normative) ugly. Mundane ugliness offers no premium. A distinctively ugly product is both incongruent to the norm and suggests intention. Because of this, we identify three benefits distinctive ugliness provides users, but only in the context of luxury. First, it helps products get noticed; incongruence to the norm increases noticeability (Kardes and Kalyanaram 1992; Zhou and Nakamoto 2007). A pilot study demonstrates this with ugliness. Second, it helps identify the luxury signal. Identification can happen via either recall (incongruent stimuli are more likely to be recalled – Stangor and McMillan 1992) or because the product itself offers some signal that makes it identifiable as luxury (e.g., a prominent logo). We hypothesize, and find, that distinctively unattractive aesthetics serve as a signal for luxury on par with loud branding. Third, while lack of beauty is perceived as merely ugly in other contexts, in the luxury context a distinctively ugly aesthetic offers the additional signal of being fashion-forward (Jones 1994). We then hypothesize and find that distinctive ugliness' ability to signal has enough value to counteract the missed benefits of attractiveness. We show that, while outside of luxury consumers consistently select on beauty, in the context of luxury they are equally as likely to choose ugly products as attractive ones.

We show evidence for these hypotheses in five studies. Two studies use real sales data from Amazon.com confirming that, while in non-luxury, consumers are more likely to select the attractive option, in luxury, distinctively ugly products are as likely to be purchased as attractive ones. To do this, we analyzed three product categories (clothing, handbags, eyewear) totaling 32,000 products. We measure attractiveness and distinctiveness using image analytics and machine learning techniques. Specifically, we collect ground-truth labels via survey on a sample of 3,000 products for each category and then apply supervised learning method to the rest of the sample.

In Study 3 (n = 184 students, 72.3% female, M_{age} = 20.03), participants were asked to imagine and evaluate a belt described in one of four manners: 2 (aesthetics: attractive vs. ugly) X 2 (brand: luxury [Prada] vs. not [Express]). An ANOVA on estimated retail price revealed an interaction ($F(1, 180)$ = 4.98, p = .027). When the belt was identified as from a luxury brand, participants suggested a higher price for the unattractive belt ($M_{Unattractive\_Prada}$ = \$416.03; $M_{Attractive\_Prada}$ = \$289.86, $F(1, 180)$ = 5.19, p = .025). There was no difference when the belts were from a non-luxury brand ($F(1, 180)$ = .248, p = .620).

In Study 4 (n = 218 students, 70.6% female, M_{age} = 19.90), participants were randomly assigned to see one of four jeans jackets in a 2 (Brand: luxury (Louis Vuitton) vs. non-luxury (Target)) X 2 (Attractiveness: attractive vs. unattractive) design. They rated the likelihood the jacket is from a luxury brand, how fashion-forward it is, and chose between the jacket or cash (amount varied between brand conditions). An ANOVA with attractiveness and brand on likelihood from a luxury brand reveals an interaction ($F(1, 214)$ = 8.08, p = .005). When the jackets were identified as from the luxury brand, participants rated the unattractive (vs. attractive) jacket as more likely from the brand ($M_{UnattractiveLouisVuitton}$ = 3.62; $M_{AttractiveLouisVuitton}$ = 2.68, $F(1, 193)$ = 6.594, p = .012). When the jackets were identified as from a non-luxury brand, participants rated the jackets as equally likely from the brand ($F(1, 193)$ = 2.23, p = .139). The same ANOVA on choice reveals an interaction of attractiveness and brand ($F(1, 214)$ = 19.99, p < .001) and replicates the results of studies 1 and 2 (attractive more likely selected in non-luxury: $M_{AttractiveTarget}$ = 3.45; $M_{UnattractiveTarget}$ = 1.80, $F(1, 214)$ = 31.965, p < .001; not in luxury: $M_{AttractiveLouisVuitton}$ = 2.74, $M_{UnattractiveLouisVuitton}$ = 3.40, $F(1, 214)$ = 2.38, p = .126). A similar ANOVA on perceptions of the jacket as fashion-forward reveals a similar pattern of results (interaction: $F(1, 214)$ = 14.18, p < .001). As expected the effect of aesthetics on choice, via fashion-forward, is significant only when the jacket is from a luxury brand (index of moderated mediation: -1.350; -.292; indirect effect when brand = luxury: b = -.885, SE = .258, CI_{95} = [-1.429; -.422] – Hayes 2013 model 8).

Study 5 (n = 205 students, 49.8% female, M_{age} = 19.44) examines a boundary condition, luxury logo prominence. Participants were randomly assigned to rate a Gucci shirt in one of four conditions: 2 (attractiveness: attractive vs. unattractive) X 2 (logo loudness: logo present vs. logo absent). An ANOVA on choice revealed an attractiveness X logo interaction $F(1, 201)$ = 4.721, p = .031). When the product was unattractive, participants were equally as likely to select the t-shirt over cash regardless of logo presence ($M_{Unattractive\_Logo}$ = 5.28 vs. $M_{Unattractive\_NoLogo}$ = 5.50, $F(1, 201)$ = .111, p = .739). When the t-shirt was attractive, they were more likely to select it if it had a prominent logo ($M_{Attractive\_Logo}$ = 5.29 vs. $M_{Attractive\_NoLogo}$ = 3.67, $F(1, 201)$ = 9,24, p = .003).

Collectively, these studies show support for the distinctive "ugly luxury premium", such that distinctive ugliness, only in the context of luxury, adds signaling power and influences consumer choice.

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Social Exclusion and Sharing Goals about the Self

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EXTENDED ABSTRACT

Social exclusion is about being excluded or isolated by others (Baumeister et al. 2005). Exclusion hinders the need for belongingness; consequently, diminishes well-being. Deteriorated self-regulation (Baumeister et al. 2005) and damaged logical reasoning (Baumeister, Twenge, and Nuss 2002) are just two of many negative consequences of social exclusion. Thus, social exclusion increases motivations to create new social bonds. Excluded individuals behave strategically to satisfy their belongingness needs. For instance, they prefer products that are liked by their peers (Mead et al. 2010) and tend to conform to the opinions of others (Williams, Cheung, and Choi 2000). In this research, we propose that self-disclosure (i.e. sharing self-relevant information with others) can be another mean to restore a sense of social connection.

Self-disclosure increases liking of the discloser (Collins and Miller 1994); hereby it plays a central role in building close relationships (Beike, Brandon, and Cole 2016). There are two main types of information one can verbally share about the self: self-general and self-autobiographical information. Self-general information gives a rough description of what kind of person someone is; and self-autobiographical information provides evaluative information that involves feelings and thoughts of a person related to a specific personal experience. Any self-relevant information, thus, varies in degree of self-disclosure (Collins and Miller 1994). The degree of disclosure is defined along two dimensions: breadth and depth (Altman and Taylor 1973). Breadth is about the amount of self-relevant information shared with others; depth is about the intimacy level of disclosure. Self-autobiographical information is more intimate than self-general information (Alea and Bluck 2003). We predict that social exclusion will increase the depth and breadth of self-relevant information.

In addition to verbal communication, people might take advantage of photos to reveal information about the self. People can reveal several different information about the self via photos including physical attributes like hair color, personality such as extraversion (Ferwerda and Tkalcic 2018); and personal experiences along with their emotions about it (Barasch, Zuberman, and Diehl 2017). Thus, we predict that social exclusion will increase the willingness to share a photo of the self to restore a sense of social connectedness.

Study 1 examines whether socially excluded individuals are more willing to engage in a social conversation with others. As an operationalization of willingness to have a social conversation, we measured total minutes participants' want to spend to have a conversation with an acquaintance following the social exclusion manipulation (Maner et al. 2007). Results revealed that participants in the excluded condition ($M_{excluded}$ = 7.21) wanted to have a longer conversation than participants in the non-excluded condition ($M_{notexcluded}$ = 4.84; $F(1, 153)$ = 4.48, $p < .05$).

Study 2 investigates what kind of self-relevant information is preferred more by socially excluded individuals. Results demonstrated that excluded participants ($M_{excluded}$ =1.47) chose self-autobiographical topics more than included ($M_{included}$ =1.14, $F(1,177)$ = 8.04 , $p <.01$); and control participants ($M_{control}$ =1.18; $F(1,177)$= 6.33, $p=.01$). However, excluded participants' choice of self-general topics ($M_{excluded}$ = .73) was not different than included ($M_{included}$ = .86, $F(1,177)$=1.48, $p >.2$) and control participants' choices ($M_{control}$ = .89; $F(1,177)$ = 2.07, $p >.1$). Therefore, Study 2 shows that excluded in-

dividuals prefer more intimate topics to share and Study 1 demonstrates that they want to have a longer conversation with others. Studies 1 and 2 provide evidence that social exclusion increases depth and breadth of self-disclosure.

Study 3 examines whether excluded individuals are more likely to include the self in the photo when they take it with the goal of sharing with others. Participants were asked to take a photo of the experimental lab in the way they perceive it and share it with us after the social exclusion manipulation. Social exclusion manipulation affected whether participants included the self in the photo or not ($\chi^2(2, 111)$ = 4.58, $p < .05$). Total number of participants who included the self in the photo was more in the excluded condition ($N_{excluded}$ =14) than in the non-excluded condition ($N_{non\_excluded}$ = 5; z = -2.64, $p < .01$).

Finally, Study 4 investigates the effect of exclusion on sharing selfies on social media to increase the generalizability of the results. The data was collected from Migrated Mothers' page on Facebook. Turkish women who live abroad constitute the members of this page. Given the nature of the platform, we expected to find plenty of members feeling socially excluded on this page. Results showed that feeling of social exclusion has a positive effect on sharing selfies (β =.412, exp(β) =1.51, Wald χ^2 = 5.82, $p <.05$). Increasing social exclusion is associated with an increased likelihood of sharing selfies.

This research makes number of contributions. First, to our best knowledge, this is the first research studying how social connection needs following exclusion might be fortified by sharing information about the self through indifferent communication channels (i.e. verbally and through photos). Second, current research extends prior research finding that social sharing is deliberative (Berger 2014; Chen 2017). Excluded individuals strategically choose intimate (i.e. deeper) self-relevant information in service of affiliation.

Additionally, results indicate that encouraging people to disclose the self on social media will not only create an advantage for excluded people to fortify their sense of belongingness but also it will allow companies to capitalize on it. Furthermore, results suggest that social media sites might circulate more episodic and sentimental content with their followers to facilitate social cohesiveness and positive attitudes toward their website.

As part of future research, we plan to explore whether a sense of self-connection is boosted after sharing self-related information. Additionally, we plan to establish the boundary conditions of the effect of social exclusion on self-disclosure. For instance, it could be that expectations about the shared content (i.e., getting likes less than others) could mitigate the effect of exclusion on willingness to share self-related content. Also, we plan to investigate whether social interaction with others increases the willingness to share self-related content on social media following exclusion. Individuals might like to share more self-related content when there is a chance that others like, comment and repost their content.

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Strengthening the Goal Gradient Effect: The Power of Implicit Temporal Boundaries

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EXTENDED ABSTRACT

Goal gradient effects suggest that it is difficult to initiate progress towards goals, but goals become more motivating as we near completion (e.g., Kivetz, Urminsky, and Zheng 2006; Nunes and Dréze 2006). These phenomena have been explained by the curvature in the value function (Heath, Larrick, and Wu 1999), which is more S-shaped for affect-rich (vs. affect-poor) decisions (Hsee and Rottenstreich 2004). When we are near goal completion, making progress delivers much more psychological payoff than making the equivalent amount of progress near initiation. Historically, these phenomena have been observed for scenarios in which goal progress is imminent (e.g., doing another sit-up). In real life, however, we often plan our goal progress ahead of time, and marketers must ask us for precommitment to future action on our goal progress (e.g., requiring sign-ups for volunteering at a soup kitchen prior to the volunteering date). Thus, we test the robustness of goal gradient effects when consumers precommit to making progress and explore the impact of "bounding" time on consumers' decisions to precommit to progress toward a goal.

First, we hypothesized that traditional goal gradient effects will be reduced in precommitment contexts (e.g., decisions to make volunteering progress that occurs in the future). Given that affect is reduced when imagining an event in the future (e.g., Lee and Tsai 2014), when individuals decide whether to initiate or complete a goal ahead of time, they feel that the future time point at which they will take action on goal progress is temporally distant from the current time point at which they make the precommitment decision. A time lag between precommitment and action on goal progress makes individuals feel farther away from and feel reduced affect about the future goal progress. We theorized that a time lag alters the curvature of the value function because diminished affect reduces the curvature of the value function. Thus, the farther in the future that goal progress seems to be, the weaker goal gradient effects. Our pilot study compared precommitment versus non-precommitment contexts and showed that goal gradient effects were strong only in the non-precommitment context (interaction of goal progress and precommitment framing, $F(1, 177) = 12.76$, $p < .001$).

Next, we show that reduced precommitment for goal completion is not inevitable when consumers plan their future goal progress. Perceptions of time between a commitment decision and goal progress are subjective and can be subtly manipulated to reduce the perceived time until progress will occur. Specifically, a bounded time lag has a more salient end than an unbounded time lag does, making the events after a bounded time lag feel closer in time (Tonietto, Malkoc, and Nowlis 2019). Similarly, a time lag that is naturally bounded by a month rollover would feel shorter than an unbounded lag. In five studies, we demonstrate that naturally bounding the time between precommitment and the opportunity for subsequent goal progress can reduce the perceived time until the opportunity for progress and increase persistence near goal completion.

Study 1 showed that participants perceived a time lag between precommitment and progress dates is shorter when the lag is bounded than unbounded ($F(1, 180) = 8.95$, $p = .003$). Study 2 was a 2 (goal progress: initiation, completion) x 2 (time lag: unbounded, bounded) experiment using the domain of volunteering. Participants imagined it was currently 4 days before a volunteering date. The volunteering progress date for participants in the bounded (unbounded) time lag condition was February 1 (Feb. 29). Participants in the initia-

tion (completion) condition imagined that the progress date was the beginning (end) of a volunteering cycle. Results revealed that the time lag felt more contracted when it was bounded than unbounded ($F(1, 307) = 5.33$, $p = .022$). Importantly, while goal gradient effects were present ($F(1, 307) = 11.51$, $p = .001$), they were qualified by an interaction ($F(1, 307) = 3.75$, $p = .054$). Only when the time lag was bounded (by the 1st), participants precommitted more to goal completion than to initiation ($p < .001$). Goal progress significantly moderated the mediating role of the perceived time contraction in the relationship between time lag and precommitment to volunteering (95% CI = [.02, .37]). Study 3 replicated findings of Study 2 while strengthening the manipulation by asking participants about real dates four days away. While goal gradient effects were strong ($p = .028$), they persisted only when the time lag between precommitment and progress dates was bounded (interaction: $F(1, 297) = 10.86$, $p =. 001$).

Although we used the 1st of a month to indicate that the time lag was bounded, we did not explicitly highlight the progress date as "the new month" in either verbal or visual formats. The 1st can signal a fresh start when it is explicitly framed as a new time period (Dai, Milkman, and Riis 2015; Tu and Soman 2014), so we next compared the impacts of time lags that are naturally bounded (as in our previous studies) versus visually bounded. Specifically, in a visually bounded time lag condition in Study 4A, participants viewed a time period bounded by the 1st as in the naturally bounded condition, but they also saw that the dates perceptually separated via two monthly calendars. Given that greater spatial distance can increase perceived temporal distance (Kim, Zauberman, and Bettman 2012), we expected to see no goal gradient effect in this visually bounded condition. As predicted, only when the time lag was naturally bounded were participants more motivated to complete than to initiate the goal progress ($F(1, 440) = 7.24$, $p = .007$). Study 4B further showed that greater precommitment in the naturally bounded than the visually bounded condition is driven by contracted perceived time until goal progress can occur and intensified affect (serial mediation: 95% CI = [.00, .14]).

In short, we find that precommitments for the future goal progress do not show reliable goal gradient effects, but that subtle cues to bound time, such as a month rollover, are sufficient to contract the perceived length of a time lag, restoring goal gradient effects.

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Targeting Independents and Interdependents to Increase Prosocial and Environmental Behavior

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EXTENDED ABSTRACT

Persuasive communications to increase prosocial behavior commonly normative appeals, and the persuasiveness of normative appeals can vary as a function of reference groups. In this project, we examine the persuasiveness of situational versus social reference groups. We orthogonally compare a situational reference group that does not represent an important social identity but situationally fits well with immediate, physical surroundings, and a social group that represents an important social identity that exists beyond one's immediate surroundings. Research has suggested that situational reference groups may be more persuasive than social reference groups (Goldstein, Cialdini, and Griskevicius 2008). These findings are seemingly at odds with the preponderance of evidence that a psychological affiliation with the reference group is necessary to trigger conformity to group norms (e.g., Harmeling et al. 2017; Turner 1982). Thus, we investigate when descriptive norms of one type of reference group are likely to be more effective than the other by examining the role of self-construal.

To the extent that norms are derived from culture, we would expect normative influences on persuasion to vary for message recipients depending on their cultural orientation. We suggest that there are likely to be circumstances under which there is cultural variability in how consumers identify with different types of reference groups. Independents and interdependents differ in their selection of influential reference groups (Markus and Kitayama 1991). Compared to independents, interdependents are much more attentive about carefully selecting and following norms of these groups because their behavior is directional and conditional on the actions of others. For them, the number of key salient reference groups is relatively small, and usually include others who share a common destiny, such as family members, friends, co-workers, or fellow citizens (Bontempo, Lobel, and Triandis 1990). Independents, on the other hand, tend to have multiple in-groups that exert less influence on their members (Triandis et al. 1988). Compared to interdependents who care a lot about group membership and display group favoritism, independents tend to treat different groups, such as friends and business owners, more equivalently (Chen, Brockner, and Katz 1998; Hui, Triandis, and Yee 1991). This suggests that independents' behavior may be more situation specific and thereby more strongly influenced by the informational value afforded by the descriptive norms of the reference group whose local situation most closely matches their own, even if the targets do not personally identify with the group. Building on the literatures that highlight cultural differences in identification with groups, we propose that consumers with independent self-construals are more persuaded by situational reference groups while those with interdependent self-construals are more persuaded by social reference groups.

Study 1 was a 2 (self-construal: independent, interdependent) x 3 (reference group: control, social, situational) design. Participants in Korea (interdependents) or the U.S. (independents) read a hypothetical hotel stay scenario. In the social (situational) reference group condition, they read a message that encouraged them to follow the norms of fellow citizens (hotel guests who had stayed in the same room) in reusing towels. Participants in the control condition read a standard environmental message. An ANCOVA yielded a significant main effect of culture ($F(1, 326) = 15.57$, $p < .001$) and interaction ($F(2, 326) = 4.21$, $p = .016$) on participants' willingness to reuse towels. As expected, independents (interdependents) were most willing to reuse towels when they read a message containing the situational (social) reference group.

Using the same hotel stay scenario from Study 1, Study 2 was a 2 (reference group: social, situational) x measured self-construal design. Index of measured self-construal using Singelis (1994) served as an independent variable. Interdependents were more willing to reuse towels than independents (b = .35, t(294) = -3.00, $p = .003$), and an interaction of self-construal and reference group was significant on towel reuse (b = -.46, t(294) = 2.82, $p = .005$). Independents (Interdependents) were more willing to reuse towels after reading a message containing a situational (social) reference group. More importantly, in this study, we showed that interdependents (vs. independents) are more likely to identify with the social than situational reference group and this group identification mediated this interactive effect on willingness to reuse towels (moderated mediation: 95% CI = [-.38, -.03]).

Study 3 was a 2 (self-construal: independent, interdependent) x 3 (reference group: control, social [college students], situational [study participants in the same lab]) design in the context of willingness to help freshmen in a tutoring program. Culture was manipulated using a text comprehension task adapted from Trafimow, Triandis, and Goto (1991), and participants read a message that contained one of reference group norms. As expected, an ANOVA resulted in a significant interaction on willingness to help ($F(2, 298) = 4.12$, $p = .017$): independents (interdependents) were most willing to help freshmen after reading a message containing situational (social) reference group.

Study 4 tested a boundary condition of decision context by employing a 2 (self-construal) x 3 (reference group: as in Study 3) x 2 (context: public, private) design. Korean and American participants received money up front and read a message that encouraged donation for children's education. Participants in the public condition wrote their name and donation amount on the donation envelope. Results revealed that donation amounts were greater in public than private ($F(1, 486) = 16.49$, $p < .001$). More importantly, the three-way interaction was significant ($F(2, 486) = 3.75$, $p = .024$). Our findings were consistent in private: a situational (social) reference group was more persuasive for independents (interdependents).

Taken together, our results provide convergent evidence that independents and interdependents differ in which reference group norms they conform to and show that our results may be limited to private decision contexts.

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When Branding Strategies Do Not Shield Sub-Brands from Negative Publicity: The Role of Consumers' Cognitive Styles

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EXTENDED ABSTRACT

Maintaining a good brand reputation in the midst of negative publicity can be challenging. Research on brand transgressions has a long history, and previous research has shown that one possible determinant of assigning blame is perceived proximity of an entity to harmful outcomes, regardless of whether or not the entity is implicated in the wrongdoing (Alicke 2000; Hart and Honore 1959; Prosser and Wade 1971). When a brand transgresses, people have similar perceptions of brands that belong to the same category—a phenomenon called categorical delegitimation—and thus greater contagion of negative perceptions between brands can occur (e.g., Borah and Tellis 2016; Paruchuri and Misangyi 2015).

Despite previous research on diffusion of moral blame within a category, it is unclear how a brand's misconduct affects other brands that do not belong to the same category. To test the degree of contagion of moral blame between such brands, we utilize the context of subbrands. Subbrands belong to the same parent firm but operate under their own name (Borah and Tellis 2016), and for the purpose of our research, we focus on subbrands that operate under different product categories. Specifically, we examine whether consumers' negative reactions to the moral misconduct committed by one subbrand can spill over to a parent company's other subbrands, and whether the degree of spillover effects differs by cultural differences in consumers' cognitive styles. .

Previous research suggests that analytic thinkers (Westerners) tend to think in discrete terms and focus on the focal object, whereas holistic thinkers (Easterners) tend to focus on relationships and the whole field (Nisbett et al. 2001). For analytic thinkers to see associations between different objects, the objects need to belong to the same category. This suggests that for subbrands that sell products in different categories, analytic thinkers are less likely to see proximity between transgressing and nontransgressing subbrands. On the other hand, because subbrands belong to the same parent firm, holistic (vs. analytic) thinkers will see greater proximity between the two and will hold more negative attitudes toward the nontransgressing subbrand. We test these predictions in three studies.

Study 1 was designed to directly measure perceived similarity between subbrands and test its role in affecting consumers' attitudes toward a subbrand that is not the target of negative publicity. Using Choi et al. (2003)'s scale, we first measured participants' individual differences in cognitive styles. Next, participants read about Reckitt Benckiser's subbrand Oxy's deadly humidifier disinfectant incident and then read that Strepsils is Reckitt Benckiser's other subbrand that sells throat pain relievers. Participants indicated their likelihood of boycotting Strepsils and the perceived proximity between two subbrands. Results revealed that the more holistic participants were, the greater the proximity they perceived between Oxy and Strepsils (β = .39, $t(199)$ = 2.90, p = .004), and the greater perceived proximity increased their likelihood of boycotting Strepsils after controlling for cognitive style (β = .63, $t(199)$ = 8.63, p < .001). The indirect effect of cognitive style on the likelihood of boycotting remained significant through a mediator of perceived proximity (β = .24, SE = .09, 95% CI = [.07, .43]). In other words, our results suggest that holistic (vs. analytic) thinkers are more likely to boycott other subbrand that
are not the target of an ethical scandal because they perceive a greater relatedness between subbrands.

In Study 2, we moderated the degree of proximity and showed that when differences between subbrands are made salient, holistic thinkers' evaluations of a brand become less negative. The study was a 2 (cognitive style: holistic, analytic) x 2 (perceived proximity: proximate, distant) design. We adapted Monga and John's (2008) pictures task to manipulate cognitive style. Participants read about the Oxy scandal. Participants in the distant perceived proximity condition read that Reckitt Benckiser's new sub-brand ezEfficiency has its own separate manufacturing facility and sells office supplies. Participants in the proximate condition read that ezEfficiency sells office supplies but shares manufacturing facilities with other sub-brands. Then, participants reported their attitudes toward ezEfficiency products. An ANOVA resulted in a significant main effect of perceived proximity ($F(1, 187)$ = 6.61, p = .011). More importantly, the interaction of cognitive style and salience was significant ($F(1, 187)$ = 5.09, p = .025). Specifically, whereas analytic thinkers' evaluations did not differ depending on the perceived proximity, holistic thinkers' evaluations were significantly more negative when the proximity between subbrands was stronger.

In Study 3, we conducted an archival study using Crimson Hexagon's ForSight social media analysis platform. We first gathered all social media posts (e.g., tweets, blogs, and discussion forum posts) mentioning Nestle and Gerber in the same post from January 2013 to December 2016. In 2015, Purina's cat food used seafood associated with forced labor, trafficking, and child labor in Thailand, and Gerber and Purina belonged to the same parent company. We chose posts originating from Hong Kong, India, and Singapore (United Kingdom and Australia) as those that belong to holistic (analytic) thinkers. Results from an ANOVA yielded a significant interaction ($F(1, 34587)$ = 10.55, p = .001). Before the Purina scandal, we found no difference in evaluations of Gerber between analytic and holistic thinkers. However, after the Purina scandal, holistic thinkers shared significantly more negative comments concerning Gerber, while analytic thinkers expressed almost the same level of negative sentiment toward Gerber as before.

Taken together, our research suggests that holistic (vs. analytic) thinkers are more likely to provide similar evaluations to a subbrand and another subbrand that is plagued by negative publicity, unless the differences between subbrands are made salient.

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The Power of Speech: Consumer Movements' Discursive Strategies in Digital Mobilization

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EXTENDED ABSTRACT

In process-oriented consumer research, consumers have been studied as either subjects or agents of change (Giesler and Thompson 2016). As subjects of change, consumers do not intervene in the process and incur the consequences of the altered marketplace, whereas as agents of change they are driving the process leading to a change of the marketplace. Social movement theory, which spans sociology and political sciences is particularly interested in contestation and collective mobilization processes (Schneiberg and Lounsbury, 2008). Consumer movements, as a specific subcategory of social movements, can be defined as intentional collective efforts by individuals to transform consumer society (Buechler 2000; Kozinets and Handelman 2004). Organizing themselves in the form of a social movement allows consumers to make their voice heard and weigh more strongly on the market (Kozinets and Handelman 2004; Weijo, Martin and Arnould 2018; Gollnhofer, Weijo and Schouten 2019). For a consumer movement to achieve its objective, it is necessary that the movement succeeds in bringing together a sufficient mass of individuals (Muniz Jr and Schau 2005). Reaching a critical size will indeed allow the movement to be visible in the media, to weigh socially, and ultimately to produce a change in the consumer society (Tilly 1978).

Within consumer movements studies, extant research has primarily aimed at examining various actions such as protests, rallies, creative events, boycotts or parodies (e.g. Kozinets and Handelman 2004; Scaraboto and Fischer 2013; Weijo, Martin and Arnould 2018). Although these studies have significantly developed our understanding of how such actions can be strategically used to achieve collective mobilization, such a focus has two main implications. First, while the internal dynamics of consumer movements have been extensively investigated, their communicative dimension, although often evoked, remains largely neglected in the tactical repertoire studied by previous works. As a consequence, the role of discourse(s) in achieving collective mobilization remains largely under-theorized. Such absence is surprising as previous research has shown that social change primarily stems from the discourses produced by actors, not their actions themselves, since actors systematically justify their actions by resorting to discourse (Fairclough 1992; Phillips, Lawrence and Hardy 2004). Contestation being largely a language-based social practice (Wiener, 2014), more attention should be devoted to exploring the role of language in contestation dynamics, and in particular to the discourses produced by actors to justify their involvement. Second, extant studies have mostly examined consumers' actions in traditional settings, paying little attention to the increasing digitalization of social movements and to how it may change the traditional dynamics of contestation. This is surprising as the rise of the Internet has significantly changed the movements' repertoires of contention, as it has been highlighted in communication sciences (Earl and Kimport 2011; Juris 2012). From online petitions to virtual sit-ins and from social networks to hacktivism (Van Laer and Van Aelst 2010), consumer movements can now benefit from new digital tools that profoundly change the way to protest. In particular, digital activism reduces the importance of a physical co-presence, limits the costs of participation, and overall transforms the way consumer movements are organized (Earl and Kimport 2011). Even in hybrid cases where online consumer movements are combined with offline actions (Earl and Kimport 2011), most of the contestation is conducted online, therefore reinforcing the importance of discourse(s) in the movement mobilization (Bennett et Segerberg 2012).

To address these limitations, we investigate how discursive strategies are used by online consumer movements to mobilize a large mass of individuals. Rather than focusing on how movements define themselves ideologically (Kozinets and Handelman 2004), we set out to examine how the ideas and arguments that the movement socially promotes are framed by the different actors involved. We explore this question in the context of the Textile Museum (Musée des Tissus) in Lyon (France), a museum that holds one of the largest tissue collections in the world with nearly 2.5 million pieces. Due to heavy funding problems, public authorities announced in 2015 that the museum was threatened with closure. In a demonstration of support for the museum, a simple amateur and collector who could not resign himself to losing such a museum started an online petition at the end of 2015. The movement rapidly grew beyond the expectations of its creator and finally succeeded in saving the museum from closure. During the two-year online contestation, the movement produced several discursive strategies that led to the final mobilization of 140'000 actors all over the world: *educating* (i.e., sharing knowledge about the museum and its collections), *demonizing* (i.e., erecting public authorities as a scapegoat and blaming them for the situation), *projecting* (i.e., discussing about the museum's future) and *moralizing* (i.e., making references to specific values). In a more dynamic perspective, the data also indicate that these strategies have contributed to different types of mobilization, from a selected mobilization of close and strongly involved consumers at the beginning of the movement to an extended mobilization of a large mass of more distant consumers at the end of the movement.

By exploring the role of discursive strategies in changing some elements of the consumer society, and doing so in the context of an online movement, this article makes several contributions to the literature on consumer movements. Specifically, although recent research has stressed the importance of collective creativity (Weijo, Martin and Arnould 2018) or the identification to the movement's founders (Scaraboto and Fischer 2013) to explain successful mobilization, we show that digitalized contestation movements may succeed without following the traditional dynamic of building a vision and translating it into a collective identity that would allow potential members to identify with the cause.

We also show how online contestation enables the co-construction of meaning. As discourses circulate via social networks, they are appropriated by new members, thus becoming out of control of the movement's initiators. Our setting allows us to engage with the interactive potential of contestation dynamics, showing that if contestation entails objection to specific issues, these issues may matter differently to different actors. When defining consumer movements as collective efforts by actors to transform elements of the consumer society, it is somewhat assumed that these actors have similar feelings and labor at building a common vision for change (Weijo, Martin and Arnould 2018). We suggest instead that online movements will lead to multiple interpretations and verbalizations of the actors' protests, a polyphony that actually contributes to serving the movement's ultimate goal.

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Sad Face Sells in Cause-Related Marketing? The Right Formula Based on Emotional Expression, Consumption Context and Consumer Differences in Implicit Self-Theories

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EXTENDED ABSTRACT

In cause-related marketing (CRM), companies promise to donate to a cause every time a consumer makes a purchase. Highlighting an image of cause is used enhance consumer perceptions by evoking affective reactions. We found two main emotions delivered in cause-focused ads: happy and sad. For example, to support the same cause (e.g., world hunger), Pizza Hut chose a laughing face while KFC chose a weeping face to present an African child in the ad. In addition to visuals, Coca Cola used the tagline "stop the ocean's tears" in their campaign to deliver the sad emotion. Even when the cause's beneficiaries are not human beings, such human emotions can still be used. Amazon promoted a "smile" box (AmazonSmile) by donating 0.5% of eligible purchases to the customer's chosen charity. This inspires our interests to examine how these two emotional expressions affect the consumer perceptions and their behaviors.

We extend CRM advertising research with two boundary conditions: consumption context and consumer individual differences in implicit self-theories. Through multiple studies, we show that the effectiveness of the choice between depicting happy or sad emotions in CRM advertising may vary as factors of consumption context and consumer implicit self-theories orientation. We provide empirical evidence that consumers who believe their personality traits are relatively fixed (i.e., entity theorists) are more likely to be attracted to a CRM ad with sad emotion under utilitarian consumption contexts or a CRM with happy emotion under hedonic consumption contexts. On the other hand, consumers who believe their personality traits are relatively malleable (i.e., incremental theorists) are more likely to prefer a CRM with happy emotion for utilitarian consumption or a CRM ad with sad emotion for hedonic consumption. In a nutshell, the key purpose of this article is to introduce consumption and consumer level variables that can provide managers with the tools to increase the effectiveness of CRM advertising.

In Study 1, participants were randomly assigned to one of the conditions of a field experiment with a 2 (emotional expression: happy vs. sad) x 2 (consumption context: hedonic vs. utilitarian) x 2 (implicit self-theory: entity vs. incremental) between-subjects design. The Analysis of Variance (ANOVA) results showed that when primed with the entity theory, participants exposed to whole-grain crackers (i.e., utilitarian consumption)/chocolate crackers (i.e., hedonic consumption) paid more money for the product showing a weeping/smiling child than those who were exposed to the same product but showing a smiling/weeping child on its package. When primed with the incremental theory, participants exposed to whole-grain crackers/chocolate crackers paid more money on the product showing a smiling/weeping child than those who were exposed to the same product but showing a weeping/smiling child on its package.

Study 2 had two major aims. First, we manipulated the beneficiary's emotion as sad or happy via verbal description. Second, we used a single product but varied the consumption goal with which it was associated to eliminate effects resulting from idiosyncratic differences between hedonic and utilitarian products. A Bluetooth headset was framed as utilitarian or hedonic. The results of regression analysis (Model 3 in PROCESS) using the bootstrapping method with 5,000 resamples indicated that when entity theorists encounter

utilitarian/hedonic consumption, their attitude toward the campaign was more positive when the CRM is promoted in an ad with a sad/happy emotion than the same ad but with a happy/sad emotion. Conversely, when incremental theorists encounter utilitarian/hedonic consumption, their attitude toward the campaign was more positive when the CRM is promoted in an ad with a happy/sad emotion than the same ad but with a sad/happy emotion.

Different from Studies 1 and 2 using humans as beneficiaries, a cause of Earth protection was used in Study 3. A context of hotel service was adopted to increase the robustness of results. Processing fluency was also tested as the underlying mechanism. Participants were grouped as either incremental or entity via the Implicit Person Theory Measure as performed in Study 2. Participants were asked to read a popular blogger's review for a hotel for a trip (vacation/ business). Attitude toward the campaign and willingness-to-pay (WTP) served as the dependent measures. Following the same procedure used in Study 2, the results of the three-way interaction were significant. The mediated moderation analysis further indicated that perceived processing fluency was a significant predictor of both (a) attitude toward the campaign, and (b) WTP. The bias-corrected 95% bootstrapped confidence interval for the indirect effect of the interaction did not include zero for either (a) attitude toward the campaign, or (b) WTP. The significance of the interactive effect among emotional expression, consumption context, and implicit self-theory was reduced after including processing fluency.

This study makes important contributions to the extant CRM literature by considering emotional expression. Although researchers have suggested that sad emotion is more advantageous in charity advertising, such the conclusion might be oversimplified in CRM contexts. This research clarifies the conditions under which each emotional expression is likely to be effective. From a practical point of view, our findings regarding how consumption context moderates CRM effectiveness have direct implications for advertising strategies. It is a straightforward and easy task to present messages with a happy or sad emotion via visual or verbal elements in an ad. The appropriate choice between these two emotions simply depends on consumers' perceptions of the product (either utilitarian or hedonic) and consumer individual differences (either entity or incremental theorists). Furthermore, every product should be clearly positioned as either utilitarian or hedonic in order to differentiate it from its competition or to meet consumers' needs. Once the position is determined, the appropriate advertising formula using the right emotional expression can then be offered. Companies could target different promotional strategies to entity and incremental theorists. For example, a customer database on online consumer profile could include measures of implicit self-theories. Ads can then be tailored for entity versus incremental theorists through emails or pop-up windows. Marketers can also prime consumers to be entity theorists in their ads or emphasize improvements in TV news, documentary movies, and scientific evidence.

Living on the Edge? Political Extremeness and Normalizing Consumption

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EXTENDED ABSTRACT

A series of unexpected political occurrences including the Brexit and Donald Trump's surprise election to the U.S. presidency have increased consumer researchers' interest in the study of political ideology, which is both expressed and constructed in consumption (Crocket and Wallendorf 2004). Recent work has explored differences between liberal and conservative consumers (e.g. Ordabayeva and Fernandes 2018). In addition to polarity (liberal vs. conservative), political ideology also varies in its extremeness (vs. moderation). The present investigation serves as an initial examination of how political extremeness, the self-perception of being more politically radical than most people (Warwick 2004), affects consumer behavior.

While some individuals may favor high levels of political extremeness, we posit that for most consumers, political extremeness is psychologically threatening. This is because extremeness interferes with sociostasis—generalized harmony that results from smooth social interactions that generally occur among individuals within a society (Cozolino 2014). Sociostasis is important because it produces the sort of positive, supportive interpersonal relationships that people depend on for their emotional, mental and physical health (Cobb 1976). As a result, individuals whose traits or behaviors might undermine sociostasis will pursue strategies that generate favorable social impressions, including demonstrations of compliance and conformity (Williams, Cheung, and Choi 2000). Because brands and products provide a material means of demonstrating forms of conformity that can increase social acceptance (Mead et al. 2011), we posit that political extremeness will cause individuals to pursue more (vs. less) popular brands as a means of rebalancing perceived normalcy and regaining social acceptance. We test this proposition in four studies.

In Study 1, we use data from a nationwide U.S. survey (32,000 participants/15,000 brands) to test our framework in the real world. Multilevel logistic regression analysis with random intercepts for brand and consumer revealed that people who are more politically extreme, meaning they are closer to the end-points of a 7-point self-reported political ideology scale (1=Very Liberal; 7=Very Conservative) are more likely to purchase the popular brand, relative to those who are closer to the midpoint of the scale (4=Neither Liberal nor Conservative) ($B = .010$, $t = 9.67$, $p < .001$).

Having observed the effect of political extremeness on consumption of the popular product in archival data, we next sought to replicate the effect in a series of controlled experiments that could be used to study the underlying process. In the studies that follow, political extremeness (moderation) was primed by asking for participants political ideology (liberal or conservative), then asking them to write about a political topic. Participants were then provided with false feedback indicating they were very (moderately) conservative or liberal, the polarity depending on their previously self-indicated ideology. In each case, the logistic regression is used to test the effect of political extremeness (moderation) and its covariates on popular choice. Popular choice is also primed by suggesting that one (randomly assigned) of the four possible products is more popular.

In Study 2, logistic regression demonstrated that primed political extremeness (moderation) increased propensity to choose the more popular product in Study 2 ($B = .74$, $z = .035$, $p = .035$). We posit that the effect of political extremeness on propensity to choose the popular product will not hold for individuals who are made to feel that their level of political extremeness is already acceptable to others. An individual who feels accepted already may feel no need to react (DeWall, Maner and Rouby 2009), or may react in the opposite direction, by seeking to self-differentiate, rather than conform (Brewer 1991). In support of this, we found that the tendency of those primed to be politically extreme to prefer popular products depends on feelings that others would disapprove of their political ideology ($B = -1.083$, $z = -2.076$, $p = .038$).

Further, we posit that the effect of political extremeness on choice of the popular product will depend on individual susceptibility to normative social influence. Research has shown that individuals who are more susceptible to normative social influence are more prone to protective self-presentation (Wooten and Reed 2004), opting instead to either go against the crowd, or completely disregard the normative suggestion. In support of this hypothesis, Study 3 showed that the effect depended on higher scores for susceptibility to normative influence ($B = 0.674$, $z = 2.239$, $p = .025$). To interpret this interaction, we conducted a spotlight analysis at the mean SNI score (M = 2.978, SD = 1.512), +1 SD and -1 SD. The spotlight analysis at the low end (-1 SD) was not significant (b0' = .005, t = .009, p = .993), however the y-intercept was positive and significant at both the mean (b0 = 1.025, t = 2.411, p = .018) and +1 SD (b0 = 2.044, t = 3.212, p = .002), verifying that people who were primed to be more politically extreme were more likely to choose the popular brand, and that this effect was stronger among those who are more likely to strategically consume in ways that promote social acceptance.

Lastly, because social conformity in consumption is more likely to occur for individuals with low (vs. high) product knowledge (Lascu, Bearden, and Rose 1995), we posit that the positive effect of political extremeness on normative choice will be negatively moderated by expertise. In Study 4, we replicated the core finding of Study 2 that political extremeness increases propensity to choose the popular product ($B = .73$, $z = 2.186$, $p = .029$, and found that expertise is a boundary condition of this effect ($B = -.707$, $z = -2.010$, $p = .045$).

In summary, the current research provides insights into how an important aspect of political ideology, extremeness, affects consumption patterns and adds richness to the discussion of whether the politically extreme are more likely to think independently or go along with the crowd.

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Distrust Reduces Attitudinal Ambivalence Through Reconciliatory Elaboration

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EXTENDED ABSTRACT

Distrust leads people to be skeptical of the validity of the next information they encounter. This skepticism then leads to a change in their "default" information processing strategies, specifically to the activation of "associations that are incongruent with (or opposite to) the given message" (Schul et al. 2004, 669). Inconsistent cognitions are known to trigger dissonance, an aversive state that individuals are motivated to reduce (Festinger, 1957). Therefore, distrust, through the activation of inconsistent cognitions should trigger dissonance, and thereby higher elaboration with the ultimate goal to restore consistency within one's belief system (Gawronski and Strack 2012). Prior research has shown that such reconciliatory elaboration reduces attitudinal ambivalence (Thompson, Zanna, and Griffin 1995; Sengupta and Johar, 2002; Johar and Sengupta 2002). Therefore, distrust should reduce attitudinal ambivalence, through increased reconciliatory elaboration.

When will reconciliatory elaboration occur? We posit two conditions, "will" and "can". Regarding the former, consumers have to be motivated to reconcile their opposite thoughts. Because the goal of reaching cognitive consistency is powerful and pervasive (Gawronski and Strack 2012), we predict that consumers will be motivated to reduce dissonance under most normal circumstances. Regarding the latter, studies related to inconsistencies and ambivalence have shown that reconciliation indeed requires elaboration. When adequate cognitive resources are depleted (e.g., rushed decisions), the effect has been shown to be reversed (Sengupta and Johar 2002).

Study 1 tested the predicted effect of distrust on attitudinal ambivalence. In exchange for 65 cents, 240 participants completed the study on Amazon Mechanical Turk. The participants were randomly assigned to one of three conditions: trust, distrust, or control. In the trust and distrust conditions, participants were asked to form an impression of a person's face. One face cued trust, while a second one cued distrust (Schul et al. 2004). To measure attitudinal ambivalence, we used the subjective ambivalence scale, which recorded for severeal topics (e.g. legalizing marijuana) the extent to which the participant felt conflicted, felt indecisive, and saw both sides of the argument (Priester and Petty 2001).

In the distrust condition, the ambivalence score was 25.60 (SD = 13.68); in the trust condition, it was 30.78 (SD = 16.97). In the control condition, it was 32.02 (SD = 16.87). An ANOVA yielded a significant difference across groups ($F(2, 237) = 3.70, p = .03$). Planned contrasts showed that the attitudinal ambivalence of the distrust group was significantly different from that of the control condition ($t(156) = -2.53, p = .01$) and the trust condition ($t(161) = -2.09, p = .04$).

In Study 2, we sought evidence for the importance of elaboration in the relationship between distrust and ambivalence. Three hundred participants completed the study on Amazon Mechanical Turk in exchange for 65 cents. They were randomly assigned to one of four conditions in a 2 (distrust manipulation: distrust vs. trust) x 2 (effort: high vs. low cognitive load) between-subject design. The trust manipulation was based on a recalled experience (Kleiman et al., 2015). The measure of attitudinal ambivalence was based on positive and negative reactions to new product ideas (Thompson et al. 1995; Sengupta and Johar 2002).

A two-way ANOVA was calculated with attitudinal ambivalence as the dependent variable and distrust and effort (cognitive load) as the two factors. The distrust x effort interaction was statistically reliable, ($F(1, 296) = 11.65, p = .0007$). For the low cognitive load condition, the attitudinal ambivalence score was lower (2.07, SD = 1.39) in the distrust condition than in the trust condition (2.66, SD = 1.52), $t(148) = -2.68, p = .008$. In contrast, for the high load, the attitudinal ambivalence score was higher in the distrust condition (2.38, SD = 1.22) than in the trust condition (1.91, SD = 1.27), $t(148) = 2.15, p = .03$.

Study 3 replicates the main results of Study 1 and 2 in a more natural setting. The distrust cue emanated from a media source. Two hundred and fourteen participants completed the study on Amazon Mechanical Turk, in exchange for 1 dollar. In the distrust condition, participants watched a 3-minute extract of the news from the Fox News network pretested to induce distrust. In the control condition, participants watched a 3-minute extract of a documentary about birds. After watching the Fox News/birds video, all participants observed three commercials in a randomized order (Amazon, Pepsi, and Tide). The participants reported their feelings of attitudinal ambivalence toward the ads on the same scale as Study 1. Following the commercials, all participants saw descriptions of two similar new athletic drinks launched and branded by Coke and Pepsi. They were asked to choose the one that they would buy. After a filler task, we assessed the participants' attitudes toward Coke and Pepsi using an IAT to obtain the "true" preference of the participant, independent of demand effects (Greenwald, McGhee, and Schwartz 1998).

In addition of findings replicating Study 1 and 2, we also tested the downstream consequences of reduced attitudinal ambivalence on the correspondence between attitudes and choice (Figure 1). We ran a bootstrapped mediation analysis to test whether attitudinal ambivalence mediated the relationship between the distrust condition and product choice (Model 15; Preacher and Hayes 2008). Overall, the moderated mediation confidence interval was [-1.31, -.12], which did not include zero and indicated significance. Study 3 shows that, by reducing attitudinal ambivalence, watching commercials on media platforms that prompt distrust increases attitude-behavior consistency.

The current research adds to the existing consumer behavior literature in three ways. First, it introduces a new antecedent of attitudinal ambivalence, distrust, and thereby contributes to the literature on attitudinal ambivalence and attitude strength. Second, this research adds to the literature on persuasion by showing that the effects of distrust need not be restricted to the target that prompted distrust. Instead, the effects of distrust activated in a noncommercial domain can influence how consumers develop attitudes toward unrelated objects in a subsequent domain. Finally, the present results contribute to the literature on mindsets by showing that distrust can fundamentally change how consumers form their preferences.

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Switching Costs: How Clustering Attenuates Hedonic Decline

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EXTENDED ABSTRACT

Introduction

Every day, consumers face the decision of how to sequence their experiences. For example, imagine that you have a free weekend to catch up on two TV shows, specifically three episodes of the Simpsons and three episodes of Modern Family. You could choose to watch all episodes of one show before moving onto the next one (so called "binge" watching), or you could intermix the two different shows for some variety each time. Which strategy would give you more enjoyment? On a daily basis, consumers similarly face decisions on how to sequence a wide range of their consumptions and experiences.

While much work has studied how consumers prefer to sequence positive and negative events (Ariely and Zauberman 2000; Linville and Fischer 1991; Loewenstein and Prelec 1993), little research has examined how different sequences of a fixed set of generally preferred experiences affect enjoyment over repeated consumptions. Specifically, we ask a simple question: would clustering the same experiences together or intermixing different experiences in a sequence lead to more enduring enjoyment?

Theoretical Background

Even the most liked experience becomes less and less enjoyable over repeated consumptions. While physiological fullness and limits have been traditionally used to explain this effect (Skinner 1953), several psychological factors, such as categorization, memory, reflection, and sentimental value (Nelson and Redden 2017; Redden 2008; Redden, Haws, and Chen 2017; Yang and Galak 2015), have been shown to influence how fast enjoyment decreases over repeated consumptions. In a comprehensive review by Galak and Redden (2018), they coined the term hedonic decline to properly reflect the complex and interrelated processes behind this phenomenon.

The literature on hedonic decline seems to suggest that intermixing would lead to more enduring enjoyment. For example, people chose to switch to a less preferred option that lowered immediate enjoyment, presumably for maximal enjoyment (Ratner, Kahn, and Kahneman 1999). The literature on adaptation also reaches a similar conclusion as different stimuli can interrupt the adaptation process and therefore provide more enjoyment. Previous research has found that even just mere blanks inserted in a sequence of preferred experiences can prolong enjoyment (Nelson and Meyvis 2008). In general, the hedonic decline literature suggests that variety of any kinds is an effective antidote to hedonic decline (Galak, Redden, and Kruger 2009; Sevilla, Lu, and Kahn 2019; Sevilla, Zhang, and Kahn 2016).

Alternatively, we suggest that clustering the same experiences together may have its benefits. Repeated exposures to a stimulus automatically lead to an in-depth familiarization with and learning about that stimulus (Alba and Hutchinson 1987). After all, we learn playing the piano by incessantly repeating the same song (and often mastering a single line of music before moving on), and playing tennis by repeating the same muscle movements ball after ball (often focusing on one stroke at a time). Recent work on experiential learning has also shown that participants learned how to use an audio editing software better when the trials were back-to-back and not interrupted by filler tasks (Lakshmanan, Lindsey, and Krishnan 2010).

If clustering leads to fuller processing and noticing more subtle details. Then, it will likely reduce hedonic decline. Noticing more aspects during experiences and consumptions have been shown to lead to more enjoyment and less hedonic decline (Crolic and Janiszewski 2016; Diehl, Zauberman, and Barasch 2016; LaTour, LaTour, and Feinstein 2011; Redden 2008). Overall, we suggest that, counter to the predictions of the prevailing theory and consumer intuition, clustering the same (vs. intermixing different) experiences in repeated consumptions can lead to less hedonic decline.

Empirical Studies

In four studies (see table 1 for a summary), we demonstrated this effect using several different stimuli (snacks, music clips, arts, and child drawings), different measurement intervals, and different control conditions. The proposed mechanism, that clustering the same (vs. intermixing different) experiences leads to perceiving the experience as less repetitive and therefore more enjoyable, was supported by mediation and moderation evidence. Several appendix studies, not discussed here, also replicated the core effect and supported the proposed mechanism.

Study 1 demonstrated that participants enjoyed snacks longer if they consumed the same snacks together rather than intermixed different snacks with an alternating pattern. This study provided support for the core effect with everyday experiences. In Study 2, the effect was replicated using music clips and artworks. This design tested and ruled out palate cleansing, a possible alternative explanation for Study 1, as the main driving force for the core effect. More importantly, this study also provided mediating evidence showing that participants in the clustered condition noticed more different details during the exposures, therefore perceived the experience as less repetitive, and enjoyed the experiences more. In Study 3, we provided half of the participants a different detail to notice during each exposure and attenuated the differences in hedonic decline due to different sequences. This moderation provided additional support to the proposed theory that the number of different details people noticed during the experience is a key driver. Study 4 demonstrated that, consistent with our theory, the sequence effect would only manifest if the stimuli are at least moderately complex. If the stimuli are too simple, there would be a very limited number of details to notice regardless of the sequencing of the experiences.

General Discussion

Our work shows that clustering the same experiences together (vs. intermixing different) can lead to spontaneously noticing more details and therefore a less repetitive and more enjoyable experience overall. This work makes several contributions. First, this is the first work to examine how the sequence of a fixed set of positive experiences influence enjoyment over time. Second, it demonstrates that, unlike suggested by the variety effect (Rolls, Van Duijvenvoorde, and Rolls 1984), variety may not always be a costless antidote to hedonic decline. Rather, the effect may depend on how it is sequenced over time. Third, our work shows that fuller processing can be triggered by the sequence of experiences, and does not require external cues or motivational drives. Additionally, our work also provides easy-to-implement suggestions for consumers to enjoy their daily experiences for longer.

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Examining the Effect of Altruistic Prosocial Behaviors on Subsequent Indulgence

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EXTENDED ABSTRACT

Previous research suggests that prosocial acts tend to influence indulgence (Khan and Dhar 2006; Labroo and Mukhopadhyay 2009; Scott and Nenkov 2016). We add to this stream of research by comparing two different inherent motivations for acting prosocially. This is important because the same behavior (a donation) may generate different subsequent behaviors due to different motivations (Weinstein and Ryan 2010). We propose that the effect of altruistic (vs. obeying-social norms) prosocial behaviors (gift giving or donation) on subsequent indulgence depends on consumers' perceptions of morality of indulgences.

Indulgences are ambivalent: although pleasurable, they often conflict with personal values (Xu and Schwarz 2009) and can be perceived as moral (a tool for trauma recovery) or immoral (a waste of money) (Jia, Jia, Hsee, and Shiv 2016; Kivetz and Simonson 2002a; Merritt, Effron, and Monin 2010).

Prosocial behaviors, especially with an altruistic motive, have been shown to enhance people's positive affect (Aknin, Dunn, and Norton 2012). These emotional benefits are eliminated or reduced when people's prosocial behaviors have a self-imposed or external pressure, just like when giving or donating with a social-norm motivation (Harbaugh et al. 2007; Kwok, Chui, and Wong 2013; Weinstein and Ryan 2010). The implication is that prosocial behaviors with an altruistic (vs. social-norm) motivation should automatically activate the goal of positive affect maintenance to a greater extent.

Affect regulation theory has shown that people in a positive (vs. neutral) emotional state will indulge more only when they perceive that the indulgent consumption can improve or, at least, not harm their emotional state (Andrade 2005). Based on this, we expect altruistic givers to indulge more as perceived morality of indulgences increases. This is because a "moral indulgence" can potentially help them fulfill the goal of maintaining positive affect. Conversely, when consumers perceive indulgences as immoral, indulging could hurt their positive feelings.

In study 1, participants read a hypothetical scenario in which they would buy a gift for a co-worker's birthday. In a between-subjects design, the motive for giving a gift was described as making the co-worker happy (altruistic condition) or it was expected everyone in the office would give a present (social norm condition). We measured participants' perceived morality of indulgences and willingness to indulge.

Results revealed a significant interaction between gift-giving motivations and perceived morality of indulgences ($B = .29$; $t(95) = 1.97$, $p = .051$). We found a significant positive regression slope in the altruistic motive condition ($B = .28$; $t(95) = 2.75$, $p < .01$) suggesting that givers with an altruistic motive tended to indulge more as the perceived morality of indulgences increased. In the obeying-social norms motive condition, however, the regression slope was not significant ($B = -.016$; $t(95) = -.15$, NS).

In study 2, we conducted a quasi-experiment in the context of the refugee migration in Europe. We provided participants with an opportunity to donate to refugees and measured their motivation to donate. Then we measured participants' willingness to indulge as in study 1. Finally, participants indicated how moral they perceive indulgences to be, as in study 1. Income was measured as a category variable with 6 different levels and was included as a covariate.

The analysis revealed a marginal interaction between altruistic giving and perceived morality of indulgences on givers' willingness to indulge ($B = .26$; $t(105) = 1.57$, $p = .12$). Importantly, however, the pattern of the data is consistent with the results of study 1. We found that the regression slope for participants with high altruistic motive was positive and significant ($B = .39$; $t(105) = 2.97$, $p < .01$), suggesting that these givers' willingness to indulge increased as perceived morality of indulgences increased. The regression slope was not significant for participants with low altruistic motivation ($B = .13$; $t(105) = 1.32$, $p = .19$).

In study 3, participants in altruistic condition were asked to recall a gift-giving situation when they wanted to make the recipient happy. Participants in obeying-social norms condition were instructed to recall a gift-giving situation in which they felt obligated to give the gift. Participants' willingness to indulge was captured by measuring the extent to which participants were willing to buy indulgent electronic products. Finally, participants reported the extent to which they perceive indulgences as moral, as in previous studies.

Regression analysis revealed only a significant interaction between giving motivations and perceived morality of indulgences ($F(1, 162) = 5.17$, $p = .024$). We found a significant positive regression slope in the altruistic motive condition ($B = .25$; $t(162) = 2.41$, $p = .017$) suggesting that givers with an altruistic motive tended to indulge more as the perceived morality of indulgences increased. In the obeying-social norms motive condition, the regression slope was not significant ($B = -.067$; $t(162) = -.71$, NS).

The current studies demonstrated that altruistic (vs. obeying-social norms) prosocial behaviors increase consumers' willingness to indulge as perceived morality of indulgences increases. We theorize that this happens because altruistic pro-social behavior activates the goal of positive affect maintenance and indulging can fulfill this goal only when they are perceived to be moral.

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Your Name Matters: The Positive Effect of Donor Identification on Beneficiaries' Reactions

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EXTENDED ABSTRACT

Every year, individuals contribute a vast amount of products and financial resources to needy people worldwide. However, the effects of these donations are not always satisfying. There is no shortage of news reports stating that recipients use their salvage money on gambling or drugs. To date, research on human prosocial behavior has mainly focused on why and when people offer help to those in need. The reactions of recipients, however, have received much less attention than the behavior of donors (Fisher, Nadler, and Whitcher-Alagna 1982; Nadler 2015). The present study focuses on donation recipients' behavioral reactions toward charitable donations. Specifically, we propose a subtle behavioral "nudge" to increase the likelihood that recipients will use donations properly. Based on research of reciprocity (Cialdini 2009; Gouldner 1960), we show that compared to receiving an anonymous donation, merely disclosing the name of the donor will increase the likelihood that the beneficiary will use the donation for the purpose for which it was intended. And the effect is driven by the recipients' heightened sense of obligation when the donor's name is disclosed.

Receiving help from others will activate the norm of reciprocity (Gouldner 1960). In addition, the intention to achieve a balance of reciprocity gives rise to a feeling of obligation, which motivates people to seek fair exchanges and to maintain a stable relationship (Cialdini 2009; Nesse 1990). As obligation is a social emotion that depends on other people's actions (Nesse 1990), it calls for a clear external social referent in the form of a person or group. In other words, in order to balance social exchanges, people need to know to whom they feel obligated (Whatley et al. 1999). Because names differentiate and identify an individual, disclosing the name of the donor creates a clear reciprocation target. The recipients will feel more obligated to reciprocate the help of an identified donor. In the case of charitable donations, however, most donation recipients are unlikely to reciprocate due to the differential economic, social and geographic differences between the donor and the recipient. In situations like this, we propose that, recipients will react to donor's kindness by using the donation properly (e.g., use the money to support their studies instead of spending it on leisure activities). Therefore, compared to receiving an anonymous donation, recipients are more likely to act in accordance with donor expectations if they know the name of the donor.

Six studies examined above proposition and ruled out several alternative accounts. Study 1a and 1b were initial demonstration of the proposed effect. Specifically, in study 1a (n = 128), participants were asked to imagine receiving a scholarship established by a retired professor from their university, and then they indicated how much of the scholarship they would spend on study-relate items. In study 1b (n = 125), participants were asked to imagine receiving a donation that aimed to release their financial burdens on transportation, and then they indicated how they would allocate the money among different expenses. In both studies, they rated their feelings of obligation. Results of both studies showed that when donor's name was disclosed, participants would spend more money on study related items (study 1a) or on transportation expenses (study 1b). And the feeling of obligation mediated the above effects.

Studies 2 − 4 examined the proposed mechanism. Study 2 (n = 170) tested an alternative explanation whereby the proposed effect is driven by a greater amount of donor information provided. The procedure was similar as in study 1a, except that we included a third condition in which more background information of the donor was provided. And the results showed that mere name is sufficient to reproduce the identified donor effect, and ruled out the alternative explanation that the identified donor effect is driven by more tangible and vivid information of the donor. Study 3 (n = 309) tested two other forms of donor identification, namely providing the name initials and staff ID number of the donor. We showed that both methods can help the beneficiary to mentally identify the donor as a fixed target of reciprocity, and lead to the same effect as revealing the actual name. Study 4 (n = 153) provided further evidence for the proposed mechanism by manipulating donor identification. Participants were instructed to imagine receiving scholarship from one of five professors. In addition to manipulating name disclosure, we manipulated whether the participants knew which one out of five professors contributed money to their scholarship. And the results showed that when recipients were provided with the names of multiple possible donors without resolution, the effect was attenuated.

Study 5 (n = 106) tested the proposed effect in a different context with real behavioral data. Participants were given a gift donated by a retired professor (whose name was either provided or not provided) who encouraged healthy lifestyles. Then they answered some irrelevant questions. Before they left the laboratory, the experimenter told them that some snacks had been left over from the earlier studies, and that they could each choose one as an additional reward. The choice was between a healthy granola bar and an unhealthy chocolate bar. They also received a follow-up survey asking them to indicate the healthiness of their first meal after the lab study. Results showed that after receiving a gift from an identified donor, participants were more likely to choose a healthier diet.

This research contributes to literature on prosocial behavior by examining recipients' behavioral responses. Second, our findings add to the literature on anonymous donations by showing the downside of anonymity. Third, our findings highlight the crucial role of obligation in efficient charitable activities. Finally, our findings have important real world implications by suggesting that donors should disclose their name to the recipient to make their donations more efficient.

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Qualifying the Sunk Cost Effect: How the Protestant Work Ethic Influences Overconsumption under Flat-Rate Pricing

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EXTENDED ABSTRACT

Overconsumption—consuming more than what is needed— is a major cause of environmental and health problems. Its related wastage in service businesses also influences operating costs and firm profitability. Overconsumption under flat-rate pricing (e.g., at buffets) has mainly been studied as a manifestation of the sunk cost effect (Arkes and Blumer 1985). For example, research has shown that consumers eat more in a buffet restaurant if they had paid in full instead of a discounted price, even though they did not enjoy eating more (Just and Wansink 2011).

Although the sunk cost effect appears in many economics textbooks and is regarded as a classic example of human irrationality, empirical evidence in support has been mixed. Many have documented this effect (Arkes and Blumer 1985; Gino 2008; Soman and Cheema 2001), but several others have failed (e.g., Ashraf, Berry and Shapiro 2010; Friedman et al. 2007). The "Many-labs replication project" found that the sunk cost effect was replicated only 50% of the time (Klein et al. 2014). To reconcile this discrepancy, the current research investigates whether there exists important heterogeneity in the tendency to succumb to the sunk cost effect, as a function of a person's belief system-- in particular, the Protestant Work Ethic (Weber 1905).

Weber (1905) introduced the Protestant Work Ethic (henceforth PWE) to explain the historical rise of Western capitalism. In its modern conceptualization, PWE is a secular belief system that describes the extent to which a person believes in hard work, asceticism, frugality and self-reliance (Cheng, Mukhopadhyay and Schrift 2017; Furnham 1990). Then how does PWE influence sunk cost effect?

First, an essential component of PWE is frugality—a belief that people should not waste their money and time for unnecessary reasons (Cheng et al. 2017). Because researchers have suggested that the sunk cost effect is likely driven by a general norm to avoid waste (Arkes and Ayton 1999; Arkes and Blumer 1985), those who believe strongly in the PWE should be more susceptible to the sunk cost effect. Secondly, an attentive mental accounting/tracking of the costs and benefits also contributes to sunk cost effect (Roth et al. 2015; Soman 2001). Because another fundamental component of the PWE, namely, the belief that "hard work leads to better outcomes" (Weber 1905; Furnham 1984; Miller et al. 2002) makes people strive to maintain cost-benefit correspondence (Cheng et al. 2017; Garrett 1973), high-PWE people are more likely to succumb to the sunk cost fallacy. Four studies show that the PWE does indeed qualify the sunk cost effect.

Study 1 (N=200) was a field experiment conducted in a fast-food restaurant in China. We designed an oversized seasonal meal set priced at RMB 45.50 (~US$6). Experimenters dressed in restaurant uniforms promoted this meal set with a discount of either RMB 5 or RMB 40, for customers who filled out a questionnaire that measured PWE (Mirels and Garrett 1971), perceived food quality, and demographics. Food left on the tray was collected and weighed. As expected, high-PWE customers ate more (i.e., left less) when they spent more vs. less, whereas low-PWE customers' consumption quantity was not influenced by expenditure. The result held after controlling for perceived food quality and demographics, hence it was not driven by price-quality heuristics (Cheng et a. 2017).

Study 2 manipulated price at two levels (low vs. high) and measured PWE. Undergraduate students (N=141, 67 female) imagined visiting a city and staying at a 4-star hotel. In the high price condition, the room price was HK$ 1,500 (approximately US$200) per night. In the low price condition, the room was at HK$499 per night due to a promotion. Participants saw a photo of a bathroom sink with five complimentary personal hygiene items (shampoo, conditioner, shower gel, mouthwash, moisturizer; each in a small bottle) beside it, and were asked to indicate how much of each item they would use (1=None, 2=1/3 bottle, 3=2/3 bottle, 4=full bottle). Participants also indicated the minimum amount of each item they would need. Finally, they completed the PWE scale and some possible covariates. Regression analysis revealed a significant interaction of PWE and price, even after controlling for minimum need. Spotlight analysis showed that high-PWE (1SD above mean) participants indicated they would use significantly greater quantities if the room price was high (vs. low), regardless of their minimum need. Low-PWE (1SD below mean) participants' usage was not influenced by price.

Study 3 replicated the findings with a different setup, and tested the mediational role of felt entitlement. Undergraduate students (N=141, 65 female) imagined buying clothes. In the high (vs. low) spending condition, customers could get one gift wall calendar for every HK$ 300 (vs. HK$ 50) they spent, and they eventually spent HK$ 1,800 (vs. HK$ 300). Therefore, everybody was eligible to request up to six identical wall calendars and they were free to request fewer if they did not need that many. Participants indicated how many calendars they would like to request, and the minimum number they actually needed. They also answered three questions that measured entitlement (e.g., "I should get the most for my money") and completed the PWE scale. Regression revealed a significant interaction of PWE and expenditure. Specifically, high-PWE participants requested more identical calendars if they spent more (vs. less) money, regardless of their actual need. Low-PWE participants' requests were not a function of their spending. Entitlement fully mediated the effects.

Study 4 resembled study 3 except that we primed high versus low PWE by asking 292 American MTurkers to read a historical letter written either by Benjamin Franklin or Charles Bukowski (Cheng et al. 2017). The results replicated.

This research reconciles the discrepancy in the sunk cost literature by discovering an important yet ignored qualifier, namely, the PWE. It also contributes to the PWE literature by showing that such a supposedly virtuous belief could lead to un-virtuous behavior such as overconsumption. By studying the antecedents of overconsumption, our findings could also help businesses and policy makers to predict and regulate overconsumption, which has important implications for environmental sustainability, public health, and firm profitability.

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Past or Future? The Impact of Time on Licensing Effect Moderated by Decision-making Mindset

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EXTENDED ABSTRACT

The literature has shown that consumers can have a license to indulge, not only from a prior goal-relevant action that they performed ("retrospective licensing"; Khan and Dhar 2006; Effron, Miller, and Monin 2012; May and Imark 2014), but also from a future goal-relevant action that consumers anticipate performing ("prospective licensing"; Urbszat, Herman, and Polivy 2002; Fishbach and Dhar 2005; Casio and Plant 2015). The present research contributes to the literature by investigating the relative impact of retrospective versus prospective licensing on consumer choice and identifying an important determinant of the relative impact. Three experiments demonstrate that the retrospective licensing effect is more pronounced among consumers with an outcome-focus mindset, whereas the prospective licensing effect is more pronounced among rule-focused consumers. In addition, our research sheds light on the process underlying the moderation influence.

The licensing effect in consumer choice refers to a consumer's tendency to choose more self-indulgent option, right after a virtuous behavior (Khan and Dhar 2006). The effect is well established in a variety of domains including moral judgments (Jordan, Mullen, and Murnighan 2011; Conway and Peetz 2012; Effron et al. 2015) and nonmoral judgments (Fishbach and Dhar 2005; Effron, Monin, and Miller 2013; Gneezy et al. 2012). In particular, research on food choice has shown that consumers are more likely to engage in indulgent eating after prior healthy eating than controls. They may also exaggerate their prior restraint eating (Effron et al. 2013) or distort their memory of past indulgent eating (May and Irmak 2014) when facing an opportunity to indulge.

Of particular importance, research has also begun to accumulate evidence that a mere will or plan of engaging in a virtuous behavior in future can drive people to pursue a vice behavior in the present (i.e., prospective licensing). For example, when expecting to see a "high-brow" magazine in the future, people were more likely to choose a "low-brow" magazine for the present (Khan and Dhar 2007). Also, after indicating their intention to participate in blood donations in a few weeks, people were less hesitant to express overtly racist views in the present (Casio and Plant 2015). In food domain, chronical restrained eaters are more likely to be indulgent in "sinful" foods when they expect to engage in a "virtuous" diet in the future (Urbszt, Herman and Polivy 2002).

Nevertheless, no research has yet directly addressed the relative impact of retrospective versus prospective licensing on consumer choice. The present research fills this gap by directly comparing the impact of past versus future licensing behavior in one experimental setting. Further, we propose (and confirm) that individuals' mindset (rule-focused vs. outcome-focused) is an important determinant for the relative impact, as discussed next.

Individuals differ in rule focus versus outcome focus in decision making (Alexander and Moore 2008; Piazza 2012). Individuals with a rule-focused mindset are guided by norms and rules. To them, a virtuous 'good' behavior is to follow the imposed rule for behaviors and so, breaking the rule is considered to be a bad behavior. Thus, they tend to behave consistently, following the rule (Cornelissen et al. 2013). In contrast, for individuals with an outcome-focused mindset, an action that can deliver a perceivable outcome is a 'good' decision, no matter how the outcome is achieved (Alexander and Moore 2008; Cornelissen et al. 2013).

Having a prior goal-relevant action gives consumers not only a successful goal progress (outcome), but also a feeling that they have followed the rule imposed by the goal. Thus, the aforementioned difference in consumers' mindset is likely to moderate the licensing effect. Specifically, when a goal-relevant action is retrospective, rule-focused consumers cannot easily justify their present indulgence based on the past goal progress, as it means that they are losing consistency in following the rule that guides their action. On the other hand, outcome-focused individuals just focus on the outcome of the prior action. Therefore, they can more easily justify an indulgent choice based on what has been achieved ("outcome"). Thus, outcome-focused consumers are more likely to indulge than rule-focused consumers. When the goal-relevant action is prospective, however, a different pattern of results is expected. That is, goal-relevant efforts in the future represent the rules that consumers are not yet obligated to carry. To this extent, rule-focused consumers may want to indulge before they are actually imposed to the rule. In contrast, outcome-focused consumers may be less able to justify their present indulgence, as a necessary goal progress (outcome) has yet to be achieved. Therefore, we hypothesize the following.

Hypothesis: *When the goal-relevant action is retrospective, outcome-focused consumers will be more likely to indulge than rule-focused consumers. When the same goal-relevant action is prospective, however, rule-focused consumers will be more likely to indulge than outcome-focused consumers.*

In experiment 1, one hundred sixty undergraduate students were recruited and randomly assigned to one of two licensing-type conditions (retrospective versus prospective licensing). Later, participants' mindset type was measured.

Participants were first asked to imagine having a diet goal. Then, they were given a detailed description for a 7 day low-calorie meal program (i.e., very light breakfast, lunch, and dinner menus for each of seven days). To manipulate licensing type, participants under retrospective licensing were asked to imagine, while reading the program description, that they just now completed the program very successfully. In contrast, participants in prospective licensing conditions were asked to imagine that they were highly committed to successful execution of the meal program, which is going to start "tomorrow." To imbue the feeling of successful execution of the meal plan, each meal plan was presented separately, day by day, with each being followed by a check box that participants after reading the plan were always instructed to mark as "successfully done" or "will be successfully done," depending on their licensing-type conditions. After reviewing the entire meal program (and marking all check boxes as successful), participants were given a chance to select a snack for immediate consumption. They were asked to indicate preference between tomatoes and a chocolate cake (1=absolutely tomato, 7=absolutely chocolate cake). In short, participants were led to make the snack choice, either after having successful diet (in retrospective licensing conditions) or after committing to successful future diet

(in prospective licensing conditions). Finally, participants' decision-making mindset (outcome focus vs. rule focus) was measured, using the scales developed by Robinson et al. (2015).

Participants' snack preference ratings were analyzed as a function of licensing type and mindset type. The hypothesized interaction was significant (= -.76, t = -2.38, p = .018). Spotlighting indicated that rule-focused participants (vs. outcome-focused participants) were more likely to choose the chocolate cake under prospective licensing (4.99 vs. 3.82) but less likely to do so under retrospective licensing (1.29 vs. 3.17), thus confirming the hypothesis.

Experiment 2 extended the finding of experiment 1 by replicating the effect by employing regulatory focus as moderator. This variable has been shown to influence rule-focus vs. outcome-focus mindset (Gamez-Djokic and Molden 2016) and thus should show the same moderation effect as mindset. To be specific, prevention-focused individuals have a lot in common with those with rule-focused mindsets in a sense that duty and obligation guides their behavior. On the other hand, promotion-focused individuals have similar tendency with outcome-focused mindsets in a goal pursuit because they behave in a way to achieve perceivable outcome, regardless of the rules and duties. In addition, the study added a control (no licensing) group to the design to confirm that both prospective and retrospective licensing manipulations are effective.

Five hundred and twenty-two participants recruited from Amazon Mechanical Turk were randomly assigned to three licensing-type conditions (retrospective licensing vs. prospective licensing vs. no licensing). Participants in retrospective and prospective licensing conditions were given the same meal program description of experiment 1, whereas those in control conditions were asked to complete a simple word-unscrambling task instead. Next, all participants were given a hypothetical choice between green mixed salad and creamy beef pasta for the immediate next meal. Finally, participants' regulatory focus was measured based on the scales developed Haws et al. (2010)

Participants' choice of the indulgent option was analyzed (by a logistic regression) as a function of licensing type and regulatory focus. The hypothesized interaction was marginally significant (z = -1.93, p = .053). Spotlighting indicated that prevention-focused participants, compared to promotion-focused participants, were more likely to choose the creamy beef pasta under prospective licensing (.50 vs. .34) but this difference was reversed under retrospective licensing (.31 vs. .34). Finally, the proportion of choosing of the creamy beef pasta among control participants was much lower, regardless of regulatory focus (.18 vs. .18), indicating that the manipulation of both prospective and retrospective licensing was effective.

One interesting implication of our findings of experiments 1 and 2 is that when people are given an opportunity for indulgent eating but have to choose when to indulge (i.e., before starting a diet program or after completing the program), rule-focused individuals are more likely to choose "before the program" than outcome-focused individuals. Our final experiment tested and confirmed this expectation.

Two hundred and forty participants from Amazon MTurk were given the same diet program description of the previous experiments. Importantly, all participants were asked to assume that they were about to start the program seriously. Next, participants were told that they are offered a free meal coupon for a delicious creamy beef pasta that needs to be redeemed only for one of two dates - either one day before the start of the diet program (prospective-licensing conditions) or one day after the completion of the program (retrospective-licensing conditions). Then, all participants indicated their choice of

the date to indulge. Finally, participants' mindset (rule-focused vs. outcome-focused) was measured, as in experiment 1.

Participants' choice of the date to indulge was analyzed as a function of decision-making mindset. The hypothesized effect was significant (= 1.34, p = .034). Spotlighting showed that the rule-focused participants were more likely to choose to indulge before the diet (prospective licensing), compared to outcome-focused participants (.72 vs. .69).

The three experiments confirmed our expectation that although both prospective and retrospective licensing can have an influence, the relative impact is moderated by individuals' decision-making mindset (rule-focused vs. outcome-focused). Interestingly, participants were more likely to indulge when they anticipated performing a goal-relevant action in future than when having already performed the same action. However, this finding is consistent with a prior finding (Fishbach and Dhar 2005) and may suggest that people's general future optimism might have come into play. Be that as it may, future research may examine this further. In addition, future research that replicates our findings in real choice situations would be desirable.

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Back to the Present: How Direction of Mental Time Travel Affects Thoughts and Behaviors

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EXTENDED ABSTRACT

Over the last fifty years, Americans' individual savings rate has fallen while the need for individuals to save has risen (Ghilarducci & James, 2018). Many people fail to save for the future at the rate they say they want to, and the current research looks at this savings behavior problem from a persuasive messaging standpoint. We build on a stream of research that suggests that people who see the present self as more similar to the future self are less likely to choose small rewards now over large rewards later (Bartels & Urminsky, 2015; Hershfield et al., 2011). Past research, while generative, has always started in the present, and moved forward to the future; yet similarity could be measured by starting at any point in time. Thus, instead of asking people, "How similar is the present self to the future self?" we start in the future and travel backward in time, "How similar is the future self to the present self?" We suspect that mentally traveling from the future to the present could increase future self-continuity and thus raise intentions to save.

The reason we suspect that traveling from the future to the present might matter, is that similarity judgments are asymmetric. For example, when people make a similarity judgment, the order of the comparison matters (Tversky, 1977). If a person starts by comparing a bigger concept to a smaller concept they will find lower similarity than if they compare the small concept to the big concept (e.g., China is less similar to North Korea than North Korea is to China). This asymmetry extends to interpersonal comparisons: people view themselves as less similar to their friends than their friends are to them (Holyoak and Gordon, 1983).

Building on the work of both Tversky (1977) and Holyoak and Gordon (1983), we hypothesize that the present self may be less similar to the future self than the future self is seen as being to the present self. Thus, we propose that starting in the future and traveling back to the present will increase future self-continuity, and lead to higher intentions to higher savings intentions. We provide evidence for our theorizing in three studies.

Study 1

The goal of Study 1 was to test whether time travel direction had an effect on similarity judgments. One thousand nine participants participated in the study. They were randomly assigned to travel either from the present toward the future or the future toward the present. A t-test showed that people traveling from the future to the present indicated higher similarity judgments than people traveling from the present to the future.

Study 2

The purpose of Study 2 was to examine whether time travel direction could change people's intentions to save. One thousand twenty five participants participated in the study. First, participants completed our similarity judgment task. Immediately following that task, we presented participants with a savings promotion. In the scenario, participants read that their bank was offering a special promotion, "This savings account returns 5% a year. After you deposit funds into the account, the money will be locked and unavailable until the year 2028, meaning that 2018 you will be helping out 2028 you," then asked participants if they would use this accounts On a 1-7 Likert scale (1-Not At All, 7-Very Much), participants in the future to present condition were more likely to use the savings account. In Study 2, we established that traveling from the future to the present could increase both similarity judgments and intentions to save; our next study investigated a potential mediator of the effect of condition on similarity judgment.

Study 3

In Studies 3a-b, we explored time perception as a potential mediator of the effect of condition on similarity judgments. Here we draw from the "Going Home Effect": trips to a well-known destination, "home", seem to take less time than trips "away" to a less known destination (Raghubir, Morwitz, & Chakravarti, 2011). We reasoned that traveling from the future to the present might share some of these same features; the present is where we live, our temporal "home", while the future is a less known destination, "away". In this study we asked participants to make a similarity judgment. We then asked them about their thought process. In both a pilot and a full study, we found that, in a two-stage model, participants in the future to present condition were significantly more likely to think about "how quickly time moves" than participants in the present to future condition. We then tested a mediation model and we found that the speed of time mediated the effect of condition on similarity judgments. In Study 3b, to control for any relative preferences, we isolated our dependent variable, time, and asked participants to rate how much they thought about the speed of time, "how time moves so quickly" on a 0-6 Likert scale (0, Not at all, 1-A little – 6, A lot). In a replication of our earlier findings, we found that the speed of time mediated the effect of condition on similarity judgments.

Conclusion

In conclusion, our findings demonstrate that mental time travel leads to higher future self-continuity, and increases our intentions to save for the future. Our work also provides early support for a temporal going home effect.

Motivated Knowledge Acquisition: The Influence of Implicit-Theories on Consumer Preference for Experiential Breadth and Depth

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EXTENDED ABSTRACT

Traditional models of knowledge acquisition propose that expertise is a function of the amount or quantity of knowledge accrued by an individual (Alba and Hutchinson 1987; Chi, Glaser, and Farr 1988; Farrington-Darby and Wilson 2006). Despite the intuitive nature of this perspective, recent research demonstrates that not all knowledge is equal—that is, individuals can accrue different *types* of experiential knowledge (Clarkson, Janiszewski, and Cinelli 2013; Hoeffler, Ariely, West, and Duclos 2013). Specifically, knowledge can differ in its *depth* (i.e., experiential *intensity*) or *breadth* (i.e., experiential *extensiveness*) (Clarkson et al., 2013; see Hoeffler et al. 2013). While breadth and depth both broadly represent knowledge, they differ in the type of knowledge a consumer accrues, which directly influences the extent to which consumers' either expand (i.e., breadth) or refine (i.e., depth) their existing knowledge base.

Yet while these knowledge types have been shown to have critical implications for the development of expertise (e.g., the enhancement of experiential appreciation, the impact of preference learning; Clarkson et al., 2013; Hoeffler et al. 2013), little is known about the motivations that prompt consumers to selectively desire these different types of knowledge. That is, not much is known about what drives consumers to prefer knowledge breadth versus depth.

In response, we propose that consumers seek out different knowledge types as a means of differentially developing different forms of expertise (i.e., a general or specialized knowledge base) as a function of their *implicit self-theories* (Dweck 1996). The construct of implicit self-theories posits that individuals exhibit a general tendency toward one of two mindsets or theories regarding the self: An incremental (or growth) mindset and an entity (or fixed) mindset (Dweck 1996, 2000). *Incremental* theorists view the self as malleable, endorse the belief that one can change over time, and thus seek to improve or develop their current self. *Entity* theorists, on the other hand, view the self as fixed, endorse the belief that one is unlikely to change over time, and thus seek to prove or optimize their current self.

As a consequence of these theories—and the motivations they encompass—we posit that implicit self-theories systematically impact consumers' knowledge preferences. Specifically, we argue that incremental theorists are motivated to seek out experiential breadth as a means of enhancing their knowledge of new conceptual spaces (e.g., diverse wine types). Conversely, entity theorists are motivated to seek out experiential depth as a means of refining their knowledge of an existing conceptual space (e.g., similar wine types). In doing so, this work seeks to offer unique insight into the motivations that systematically impact consumers' preference for experiential breadth and depth and, consequently, the implications of these chronic motivations for different forms of expertise. We explore these hypotheses across three experiments.

Using a consequential choice paradigm, Experiment 1 presented participants with a consumption choice between one of two chocolates. Importantly, the two options were the same; however, we altered the description of the chocolates to signal either knowledge breath or knowledge depth. Results revealed that incremental theorists showed a stronger preference for the chocolate that offered greater knowledge breadth, whereas entity theorists showed a stronger preference for the chocolate that offered greater knowledge depth. Moreover, a subsequent follow-up showed this effect held even when participants' favorite chocolate was included as an option.

Experiment 2 explored the extent to which the distinct knowledge preferences of entity and incremental theorists demonstrated in Experiment 1 are driven by different motivations (i.e., learning and performance; see Dweck 2000). Specifically, incremental theorists tend to be focused on development and improvement goals and are thus *learning*-oriented. Entity theorists, on the other hand, tend to be focused on self-enhancement goals and are thus *performance*-oriented. In this study, participants were presented with a series of choices characterized as offering *breath* or *depth* knowledge experiences (adapted from Clarkson et al. 2013), asked to make a choice between the breadth and depth experiences, and then to respond to separate scales assesses their learning and performance motivations (Dweck and Leggett 1988). Results revealed that incremental theorists showed a greater preference for breadth, whereas entity theorists showed a stronger preference for experiences providing greater knowledge depth. Further, analysis of our dual-mediation model revealed significant pathways, such that the effect of incremental theorists on knowledge preference was driven by *learning* motives, whereas the effect of entity theorists on knowledge preference was driven by *performance* motives.

To bolster support for the mechanism proposed to underlie the effect, we directly manipulated the motivation surrounding knowledge acquisition in Experiment 3. That is, we manipulated the extent to which participants were motivated to learn or to perform. The findings revealed that those with a learning motivation heightened the preference for knowledge breadth, whereas those with a performance motivation heightened preference for knowledge depth—a finding that bolstered the mediation pathway in Experiment 2. Importantly, this study addressed alternative explanations related to mere differences in openness to experience

As noted, expertise is often characterized as a function of knowledge quantity. However, not all knowledge is equal (Clarkson et al. 2013; Hoeffler et al. 2013). This research explored the motivations that alter consumers' preferences for these different types of knowledge (breadth vs. depth). Specifically, implicit self-theories exhibited a robust and systematic influence on individuals' knowledge preferences, with incremental theorists showing greater desire for knowledge breadth and entity theorists showing greater desire for knowledge depth. Importantly, however, these differences were driven by distinct motivations—namely, the desire for enhanced learning and performance. Collectively, these findings provide a novel framework of motivated knowledge acquisition that documents: (i) an unexplored antecedent to the types of knowledge individuals seek out, (ii) a unique perspective on the processes that drive knowledge accrual, and (iii) the role of implicit self-theories in stimulating key motivations that heighten consumers' preferences for different knowledge types.

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The Personalization-Privacy Paradox in Attention Economy

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EXTENDED ABSTRACT

The personalization-privacy paradox is a cycle: while personalization is considered to be a privacy benefit, consumers are reluctant to provide personal information for it; in turn, marketers' exploitation of consumer personal information to provide personalization can trigger consumers' privacy concerns. Although personalization is a stimulus that triggers attention processing, the theories that underlie this paradox understate this phenomenon. Besides, theoretical advances regarding attention are late compared to the evolution of businesses' and policymakers' agenda. Investigating the personalization-privacy paradox through the lens of attention thus appears to be one of the most promising avenues for research. Indeed, while consumers' attention is fragmented by a multi-screen environment, marketers are still looking for the best way to capture attention through personalization. The present theoretical paper shows to what extent insights from attention economy (i.e., governmentality, ecology of attention and policies) are valuable to understand the attentional noose that is tightening around consumers.

To Lanham (2006), due to our lack of attention, we are unable to make sense of the whole wealth of information. To better understand this issue, he proposes that "devices that regulate attention are stylistic devices" (2006, XI). To illustrate the way he views attention economy, he uses the example of the Hawthorne effect (Landsberger 1958). The experiment consisted of investigating the impact of light on workers' behavior. No matter the level of brightness, the workers' productivity was enhanced by the presence of light. Actually, Lanham (2006) explains that the light triggers theatrical self-awareness among workers because they know they are observed. More generally, "an attention economy is irremediably and self-consciously dramatic" (Lanham, 2006, p. 10).

The Internet "constitutes an economics of attention in its pure state", where "attention is everything" (Lanham 2006, 233). That is why, the personalization-privacy paradox triggers an effect of the society of surveillance (Acquisti, Taylor, and Wagman 2016), just like the said Hawthorne effect. Given that "human attention is surely an aggregative, a social, event as well as an individual characteristic" (Lanham 2006, 265), future research could thus investigate the personalization-privacy paradox through the lens of Foucault's (1978) concept of governmentality, especially because it reconciles both micro- and macro-levels.

By managing stylized effects (Lanham 2006), governmentality would be beneficial for marketing research to understand how to "build attention traps" and "create value by manipulating the ruling attention structures" (Lanham 2006, 53). Analyzing the personalization-privacy paradox through the lens of governmentality enables researchers to integrate insights from both economics and marketing, particularly by encompassing micro- and macro-levels. That being said, governmentality, which is how populations can be governed, makes necessary to take into account the environment that affects consumers' attention. This leads to the advent of an ecology of attention.

Due to the lack of attention, information and communication technologies can hamper consumers' life balance (e.g., work-to-nonwork conflicts) (Butts, Becker, and Boswell 2015; Stanko and Beckman 2015). Public transportation is a major issue. Indeed, since people live more and more in cities, they face daily urban crowding in public transportation, which results in anxiety. That is why mobile devices comfort people who engage in mobile immersion to escape from the physical crowd. Turning inwards makes people more responsive to personalized ads as their attention to mobile increase (Andrews et al. 2016). Indeed, according to behavioral constraint theory (Stokols 1972), people find strategies to avoid the inconvenience of being in a crowd (e.g., by turning inwards (Milgram 1970)).

The race to monetize our attention leads to congestion externality (i.e., excessive advertising) (Anderson and de Palma 2012). Consumers thus have to deal with constant notifications that deviate their attention from other people and even from their own desires (Citton 2017). Competition for consumers' attention also leads to a depletion of overall attention and intellectual resources (Citton 2017), which increases uncertainty, vulnerability, and risk (Walker 2016). To avoid surrendering attention to technology, further research should investigate to what extent behavioral constraint theory might provide insights to create balance. This would enable consumers to regain self-control, which is "the ability to control our thoughts, feelings, and behavior" (Petersen and Posner 2012, 82) and to avoid pathologies (e.g., burnout) (van Knippenberg et al. 2015). Overall, the key is to capture the quality of attention, rather than its quantity (van Knippenberg et al. 2015).

In such a hostile environment for attention, what policies should be implemented?

The scientific consensus on privacy is clear: the stakeholders (e.g., firms and consumers) have often conflicting objectives, privacy concerns are constantly evolving over time, and privacy regulation should be individualized to specific markets (Acquisti et al. 2016). There is a need to implement an effective attention management policies to undermine the personalization-privacy paradox pressure (Ayyagari, Grover, and Purvis 2011), especially for consumers who surrender to technology (Walker 2016).

However, the major limitation of the previous recommendations is that they are reactive (Walker 2016). To fully encompass the issues regarding both the personalization-privacy paradox and attention management, education is necessary (Karwatzki et al. 2017; Walker 2016). However, a balance must be reached. If consumers become too reluctant to enter online exchanges, they can be harmed. Indeed, previous works that studied privacy in a context of limited attention (Anderson and de Palma 2012; Armstrong, Vickers, and Zhou 2009; Johnson 2013; Van Zandt 2004) showed that there exists a prisoner's dilemma situation (Acquisti et al. 2016): if all consumers opt out of personalization-privacy trade-offs, price competition is weakened, which is costly for consumers.

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Injudicious Disclosure

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EXTENDED ABSTRACT

People sometimes say things they later regret. Perhaps something awkward is said on a date, or an unlikable habit is disclosed during a job interview, or maybe "true feelings" are expressed during a heated argument. Most people understand which information to conceal to avoid awkwardness and offence, yet life seems to be full of moments when we say something out of place that we later regret. One thing these examples have in common is that they occur during arousing situations. Does arousal weaken our ability to conceal information?

In this research, we combine research on dominant responses (Hull 1943; Zajonc 1965) and information concealment (Slepian et al. 2017; Slepian and Kirby 2018) to investigate how arousal increases tendencies to disclose information that people would otherwise keep to themselves ("Injudicious Disclosure"). In general, people regulate the types of information disclosed in social encounters, and this includes strategic concealment of information judged inappropriate (Lane and Wegner 1995). However, the mind also often wanders to information we mean to conceal (Slepian et al. 2017), and we suggest this makes thinking about information that is consciously suppressed habitual. When people are aroused they are more likely to rely on their habits, easily accessible dominant responses, when performing a task (Zajonc 1965). This may include recalling welllearned or rehearsed information (Zajonc and Sales 1966). Thus, if concealed information is habitually thought about, and arousal increases an habitual response, then we expect arousal to increase the likelihood that an individual will disclose information that they would have otherwise kept to themselves.

We define injudicious disclosure as the sharing of personal information one would normally conceal given the circumstances. For example, people do not usually share deeply personal information to someone they have just met, or disclose their dislike for authority in a job interview. Injudicious disclosure of information is context dependent, since disclosing the information in these examples to a friend might be befitting. The nature of injudicious disclosure is also not dependent on the valence of information disclosed (positive or negative). For example, someone may claim that they love taking days off, which might be interpreted by a job interviewer as being rather negative and might cause the interviewee regret, but at the same time be viewed by the person's romantic partner as being rather

positive. Information shared injudiciously is different than spontaneous off-the-cuff comments, such as cursing in public when surprised, or getting someone's name wrong. In these contexts, the comment is ill-constructed or ill-construed in the moment but does not result from a failure to conceal. Per our definition, injudicious disclosure centers on pre-existing information that if not disclosed would require some effort to conceal (Lane and Wegner 1995; Slepian et al. 2015). The mind frequently 'wanders' to information one tries to conceal (Slepian et al. 2017), and therefore we suggest that this kind of information would become rehearsed and therefore a dominant response over more strategically formulated responses.

In sum, we argued that information that takes effort to conceal in social situations, such as overly personal facts or information that may reflect poorly on one's character, is habitually thought about, and therefore a dominant response and more likely to be disclosed when aroused. We tested our hypotheses in five studies. In study 1 we conducted a preliminary test on the idea that arousal increases tendencies to disclose more personal information, and explored the different types of personal information disclosed in a dating profile disclosure exercise. In study 2 we tested the severity of disclosure, asking participants to describe a time when they wrote inappropriate, unkind, or rude comments online. In addition, we ruled out the possibility that arousal might enhance tendencies to disclose personal information because it makes people feel closer to their intended audience, and that arousal increases tendencies to self-promote. In Study 3 we further tested our theory that arousal increases injudicious disclosure by asking participants to choose information to include in their profile on a fictitious job website. We provided participants with pretested items and predicted that aroused participants would be more likely than non-aroused participants to choose often-thought-about items that although truthful, one would not normally disclose to potential employers. In Study 4 we manipulated rumination of thoughts in an information disclosure exercise, predicting greater disclosure of potentially embarrassing personal information for information that was thought about often. Finally, in Study 5 we tested our assumption that disclosing information that might be perceived as overly personal or potentially harmful to one's character is injudicious, in the sense that the discloser would change their decision to share the information if given time to reflect.

"I Keep Thinkin' About It": Consumers' Interpretation of Their Spontaneous Thoughts

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EXTENDED ABSTRACT

Research investigating a nonpurchase decision has focused on the antecedents and consequences of the decision. In terms of antecedents, the decision is more likely when the decision is difficult (Greenleaf and Lehman 1995; Tversky and Shafir 1992); when none of the alternatives are attractive enough (Karni and Schwarz 1977); when there are too many options (Iyengar, Huberman, and Jiang 2004; Iyengar and Lepper 2000; Scheibehenne, Greifeneder, and Todd 2010), or when the options are too similar (Dhar 1997). In terms of consequences, the focus has been on inaction regret which may cause the consumer to be less likely to purchase the product in future via inaction inertia (Tykocinski and Pittman 2001) and/or dissonance reduction (Arkes, Kung, and Hutzel 2002). For inaction regret to occur an assessment must be made that the correct choice was not made via an upward counterfactual thought of "it would have been better if I had purchased …" (Zeelenberg and Pieters 2007). Our research is the first to investigate the step between the nonpurchase decision and the realization that a reconsideration of the nonpurchase decision should transpire. In the absence of the physical presence or consumption of the product, which is the case when the item was not purchased, what triggers the appraisal of the decision?

We propose that sometimes, after a nonpurchase decision, the frequency of the unpurchased item *spontaneously popping into mind* is interpreted as an indication that the decision needs to be re-considered and that the relationship is mediated by post-thought liking. In other words, just the occurrence of nondeliberative thoughts of the nonpurchased item intruding consciousness is interpreted as meaningful, even if the intrusion is valence and, importantly content free.

Spontaneous thought intrusions

A spontaneous thought intrusion occurs when a thought comes to mind which has no obvious thematic connection to previous thoughts (Irving 2016; Sripada 2018) and is not stimulated by the external environment (Mason, Bar, and Macrae 2009; Smallwood et al. 2008). Importantly, spontaneous thoughts are generated for reasons, and by processes, inaccessible to the thinker (e.g., Marchetti et al.2016; Miller 1962) which is why meaning is made (Morewedge and Kupor 2018). It has been argued that spontaneous thought intrusions are related to goals, intentions, memories, or future events that are unresolved or unfulfilled and require more attention (Mason et al. 2007; Morsella et al. 2010). For example, the spontaneous thoughts may be reminders that there is something we might need to do in the future or, we argue, that there is something from the past that needs to be reconsidered.

From the perspective of the use and interpretation of spontaneous thoughts in purchasing and consumers' behavior, spontaneous thoughts about products and experiences may be perceived to hold important insight into the self (Bar-Anan, Wilson, and Hassin, 2010) which provide information about our undistorted preferences (Dijksterhuis et al. 2006; Wilson and Schooler 1991), free of external influence or even the tarnishing of conscious thought (Morewedge and Kupor 2018). But it may be that a "I'll put it out of mind" strategy causes more frequent intrusions and an illusion of meaning. We argue that consumers interpret the frequency, not the content, of spontaneous intrusions about a nonpurchased item as a signal that the nonpurchase decision should be reconsidered.

PRESENT RESEARCH

In study 1, we test the lay belief that the presence of spontaneous thoughts following a nonpurchase decision means a consumer should question the efficacy of their initial decision because of the post-thought liking for the nonpurchased product. Participants imagined a situation where they did (or did not) have recurring spontaneous thoughts after a nonpurchase decision. Participants in the spontaneous thoughts present condition were more likely to re-evaluate the nonpurchase decision. The relationship was mediated by post-thought liking. In study 2, we replicate the finding with actual reported thought frequency. Participants imagined the same shopping scenario, but spent two minutes recording whatever thoughts came to mind. In study 3, we use an actual consumption decision. Participants were offered a chance to purchase a university-branded cup (as expected 83% did not purchase). We use a thought suppression technique (Wegner et al. 1987) for half of the participants which generates meaningless thought intrusions of the unpurchased item to show they are interpreted as a signal to reconsider the previous nonpurchase decision. Finally, we introduce a misattribution manipulation to test the strength of the effect. Half the participants were told that the spontaneous thoughts were caused by the study task. We found a moderated mediation for participants in the non-suppress condition (no instructions to not think about the cup) such that the reported frequency of thoughts led to post-thought liking and to reconsideration of the nonpurchase decision. We also found that the relationship between frequency and post-thought liking was eliminated by the misattribution manipulation such that the effect was non-significant in the misattribution condition. In the suppress condition the mediation held in both the misattribution condition and the no misattribution condition.

GENERAL DISCUSSION

The research presented here contributes to a nascent literature considering the interpretation of spontaneous thoughts. Although previous research has investigated the role of spontaneous, vs deliberate, thoughts when determining how attracted and committed participants were to their romantic partners (Morewedge, Giblin, and Norton 2014), this is the first investigation of how consumers use the frequency of nondeliberative, spontaneous thoughts to reflect on previous consumption decisions. We have shown that frequency matters. In the suppress condition, which we interpret as a no content or meaningless thought condition because the thoughts are generally realizations that the thought has popped into mind and must quickly be removed, the thoughts are interpreted as signals to reconsider the initial no purchase decision. In fact, in the suppress condition the misattribution manipulation did not eliminate the effect. We also add to relatively limited literature examining nonpurchase decisions which is important as these decisions happen regularly. In summary, consumers appear to strongly hold a belief that spontaneous thoughts after deciding not to buy something mean they need to rethink their decision "cuz I keep thinkin' about it."

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Overcoming Consumption Limitations:
A Study of Savvy and Motivated Migrant Consumers

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EXTENDED ABSTRACT

For many consumers in urban, metropolitan areas in the U.S. and other more developed countries, shopping centers, indoor malls and other retail venues are easily accessible. Consumers today also have the option of shopping without leaving the comfort of their homes. With the click of a mouse or the push of a button, items are purchased and delivered straight to their doorsteps. Technology has made shopping seemingly effortless, impulsive and immediate.

Yet, for consumers in less urban or less developed regions, even with the technological innovations today, shopping for preferred goods and services still requires effort – more effort than the average consumer and retailer in developed countries are often aware of and appreciate. In this paper, we highlight that effort, drawing parallels between the monumental physical and emotional tasks inherent in the process of migration for relocation purposes and a more temporal, yet equally pervasive, type of migration for shopping and consumption purposes.

Our research focuses on 'migrant' consumers in developing countries. Migrant consumers are defined as consumers who willingly traverse long distances, typically by air, to acquire preferred goods (clothing, electronics, appliances, even furniture) and stockpile on preferred brands. Through ongoing and pervasive exposure to U.S. consumer culture through cable television and a vibrant U.S. and European tourist industry (Knight 2013), migrant consumers are acutely aware that their preferred goods, services and brands can easily be acquired by their U.S. counterparts. Scarcity and lack of easy access stem from a combination of factors including higher prices (ECA International 2017), duties and taxes, inadequate selection, and retail industry emphasis.

Shopping for migrant consumers requires forethought, planning, pre-meditation, networking, scheduling of shopping activities and significant resource gathering, followed by rapid resource spending, if they are to overcome the obstacles of limited proximal access to preferred marketplace venues. However, despite the tremendous buying effort demanded by this transnational consumption activity or 'pseudo-migration', a significant number of these consumers undertake migrant shopping year after year.

Migrant shopping as we have described it, bears a strong similarity to the well-documented cross-border shopping undertaken by consumers who traverse the borders between the United States and Canada or Mexico (Yuan, Fowler, Goh, and Lauderdale 2013; Dmitrovic and Vida 2007). While cross-border shoppers may fall under the umbrella of migrant consumers, many migrant consumers engage in a different level of consumption activity, in terms of the process, intensity, frequency and motivation. The migrant consumers in this study expend greater effort, spend more money, and exhibit higher levels of both anticipation and anxiety. Migrant shopping and consumption behavior occurs around the world, with port cities such as Hong Kong, Dubai and New York as favorite destinations. In this paper, we focus on port cities like Miami and New York, considered global shopping hubs in the Americas, particularly for consumers from the Caribbean, Latin and South America.

Living in small island countries, many consumers in the Caribbean travel frequently for professional and personal reasons and shopping has increasingly become a major component of annual, semi-annual vacations, sojourns and even business trips to the U.S. While shopping has been studied as a practice that involves browsing, reconnecting or socializing, shopping for these consumers is most importantly about making actual purchases. Purchase behavior is often intense, focused and time-driven since shopping trips can be relatively infrequent and costly in time and money.

Thus, the objective of this paper is two-fold. It brings attention to a consumption activity that, by its seeming frequency and magnitude impacts economic and marketing activity, both in the migrant shopping destinations, and in the countries in which the consumers reside. At a more conceptual level, it raises new questions about effort, access and motivation. What drives people and how far will they go to seek new experiences and gain access to more highly rated brands or better prices? Our research questions are as follows: 1) What are the processes, practices and strategies employed by migrant consumers to plan and execute their shopping trips? 2) What motivates consumers to repeatedly engage in these migrant shopping practices?

The authors used a three (3) stage mixed method approach to explore the behavior of migrant consumers: a pilot phase, interview phase and survey phase. In the pilot phase, the authors conducted informal informational interviews with consumers engaging in migrant shopping behavior to gain a sense of the viability of this research. A pilot survey questionnaire was developed based on these initial discussions, using modified established cross border shopping scales to measure the motivation, process and outcomes (Yuan, Fowler, Goh, and Lauderdale 2013). In the 2nd stage, twenty-two 60 to 90 minute depth interviews were conducted with a purposive sample of migrant shoppers in the Caribbean island of Barbados, which is approximately four (4) hours south of Miami by air. Interview participants were selected from the initial online survey, as well as snowball samples based on the researchers' contacts. Midway through the interviews, initial themes were synthesized with the findings of the pilot survey to develop the final online survey questionnaire for the third phase, which included 200-250 survey respondents, ranging in gender, income and education levels. The final survey data were used to augment and determine the generalizability of initial themes emerging in the qualitative data. The data collected from the final online survey and the depth interviews are analyzed using the statistical software program, SPSS, and the textual analytic software program, QSR NVivo, respectively.

It is clear that the effort expended and the complexity of the practices employed to plan and execute the shopping trip exceed those of the typical U.S. shopper, and of cross-border shoppers discussed in the literature. Our findings focus on three key aspects of the migrant shopping experience: access, effort and motivation. Early insights reveal the effort consumers expend and the underlying motivations to overcome consumption obstacles stemming from geographical constraints, demonstrating the complexities and limitations of consumer access and choice.

Valence Framed in Percentages – When the Rich Gets Richer

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EXTENDED ABSTRACT

Numerical values in online reviews can be important indicators of product performance and thus helpful to consumer decision making. However, such information can sometimes make it harder for consumers to make a decision if a tradeoff exists. Particularly, between two products, if one has a higher review valence yet lower review volume than the other (e.g., 88% of 50 consumers recommend product A versus 80% of 200 consumers recommend product B), which one will consumers choose? Although there has been a great deal of research on review volume and valence, the relative impact of these two numerical values on consumer purchases is still inconclusive (King, Racherla, and Bush 2014).

Valence, which reflects the favorability of product evaluation, can be expressed not only on a rating scale (e.g., 5-star) but also as binary choices such as recommend or not and thumbs up or down. Firms can choose to present binary choice-based valence as either percentages (e.g., 60% of 50 consumers recommend this product, as used by Lowes.com) or absolute numbers (e.g., 30 out of 50 consumers recommend this product, as used by Ocado.com). In this research, we show that the two formats of binary review valence cause consumers to adopt different processing approaches and hence make choices in different ways. Specifically, when review valence is in the percentage format, a percentage valence score is based on a 0~100% scale that indicates the positivity of product performance. Meanwhile, review volume, which can be any positive integer, signifies product popularity (Duan, Gu, and Whinston 2008). Since valence and volume are presented as two distinct attributes, consumers tend to adopt a piecemeal approach which favors intra-attribute comparison over intra-product comparison (Muthukrishnan, Warlop, and Alba 2001). Under this approach, the difference in review valence between two products becomes overshadowed by the difference in review volume. This process favors the high-volume product.

In contrast, when review valence is in the absolute number format, consumers adopt a holistic approach that favors intra-product comparison over intra-attribute comparison. As the number of recommendations is now expressed in the same format as review volume and valence is meaningful only through the relative relationship between the two numbers, consumers first compare the two numbers within each product and then between the two alternatives. While the intra-product comparison can be made through either a subtraction (total reviewed-total recommended) or a division exercise, previous research shows that subtraction calculations are more likely to be employed than divisions (DelVecchio, Krishnan, and Smith 2007). Since the subtraction reveals a larger "do not recommend" gap for the higher-volume product than for the lower-volume product, consumers' likelihood of choosing the product with a greater valence yet lower volume is greater.

Study 1a was conducted to demonstrate that consumers are less likely to trade off review valence for higher review volume when valences are presented as absolute numbers than when they are in percentages. The study featured a 2 (valence format: percentage versus absolute numbers) x 2 (volume difference: small versus large) between-subjects design. Respondents made a binary choice between two pairs of shoes characterized by valence and volume tradeoffs. Our results showed that expressing valence as absolute numbers reduced the likelihood of choosing the high-volume option. Study 1b corroborated the effect observed in Study 1a by using the same valence level for the two products (80%). In addition, consumers viewed the products sequentially rather than simultaneously. The results were consistent with Study 1a.

Study 2 provided a more stringent test of the proposed effect by setting one product option to have a very small review volume relative to that of the high-volume choice. Furthermore, to generalize the effect of numerical framing, the study extended to two other categories - blankets and microwave ovens. Similar to the earlier studies, respondents' likelihood of favoring volume over valence was lower when valences were presented as absolute numbers than when they were in percentages.

Study 3 involved an eye-tracking experiment to verify the process under which consumers examined the review information. Based on earlier reasoning, valence expressed as absolute numbers should elicit a holistic processing approach, which implies that consumers' visual focus is more likely to move between the valence and volume information of the same product. Meanwhile, the piecemeal processing strategy deployed under a percentage format should make consumers shift their eyes' focus between the valences of the two products and between the two volumes. Supporting this reasoning, there was a higher number of intra-product saccades (i.e., eye movements) under absolute number framing than under percentage framing. Meanwhile, the number of inter-product saccades was higher in the percentage condition than in the absolute number condition.

Study 4 presented another test of the underlying process by introducing color representation as a moderator. Even when both valence and volume are expressed as absolute numbers, the different colors used to present the two numbers are likely to signal that the two numbers are related to distinct attributes (Labrecque and Milne 2012). This will cause consumers to act more like those in the percentage format condition by using a piecemeal approach. Our study showed that, by disrupting holistic processing and encouraging piecemeal processing using different colors, consumers behaved more similarly between the absolute number and the percentage conditions.

Taken together, our studies add to the understanding of review valence versus volume effects. Furthermore, our research answers the call for more research on how consumers make comparison selections, when multiple comparison approaches may be appropriate (Simonson et al. 2013). We provide empirical evidence that situational factors involving information representation and task format can shift consumers' comparison strategy and produce non-trivial consequences in consumer choice outcomes.

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Looking Up or Down on the Social Ladder: How Socioeconomic Comparison Influences Self and Other Attributions of Prosocial Behavior

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EXTENDED ABSTRACT

Inequality has soared to unprecedented levels (Atkinson, Piketty, and Saez, 2011; Newman, Johnston, and Lown, 2015). Therefore, it is important to understand how people will respond to downward and upward socioeconomic comparisons, and whether the rich will act in the best interest of society. The literature presents a mixed effect of socioeconomic status on altruism. Even though wealthier individuals have more opportunities and resources to help others (Andreoni, Nikiforakis, and Stoop, 2017; Smeets, Bauer, and Gneezy, 2015), and are expected to share their resources (List, 2007), they don't always act more prosocially (Piff et al., 2010; Kraus, Côté, and Keltner, 2010).

Socioeconomic comparison, where individuals compare self-information with relevant target information (Locke, 2007), allows researchers to comprehend when different social classes donate and when they attribute to others. We propose that individuals will make self-other judgments based on their social position. Precisely, upwards will infer lower self-obligation to act prosocially (i.e., donate money) when compared to others above the self. However, downwards will not increase monetary donations when doing self-other judgments.

Correspondingly, upper-classes will expect and accept social inequality, reducing their charitable behavior (Winterich and Zhang, 2014). Thus, donations attribution responsibility will not increase monetary donations to downwards. We propose that these judgments are based on individuals' meritocratic beliefs, which endorses the view that high-status are more deserving than low-status ones (McCoy and Major, 2007). Hence, meritocratic beliefs may lead high-income consumers to be less generous (Côté et al., 2015) and low-income consumers to attribute to others the obligation to redistribute (Ordabayeva and Fernandes, 2017).

First study applied a 3(social comparison: upward vs. downward vs. control) by 2(evaluative perspective: self vs. other), using objective social comparison manipulation (Piff et al., 2010, 2012). As dependent variable, participants (n=204) were exposed to an appeal from Habitat for Humanity (Han et al., 2017). We asked participants how much to donate from the self-(vs. other) evaluative perspective ("How much would you donate (vs. you think others would donate) for this cause?"; from $0 to $100). A two-way ANOVA revealed a significant interaction ($F_{(2,198)}$=8.033;p<.001;ηp^2=.075). Upwards assigned to others a higher monetary donation (M_{other}=60.55;M_{self}=24.62;$F_{(1,198)}$=35.680;p<.001;ηp^2=.153).

Study 2 uses a subjective manipulation of social comparison, investigating the mediating role of donation attribution responsibility. Participants (n=186) were presented to the same design as Study 1, randomly assigned to social comparison manipulation. As dependent variable, we used an appeal from UNICEF (Duclos and Barasch, 2014). Participants were asked how much to donate from the self-(vs. other) perspective ("How much should you donate (vs. others should donate) for this cause today?"; from $0 to $100). We also measured donation attribution from the self-(vs. other) perspective ("Please, point out how much you attribute as being yours (vs. being to a person who is in a superior/an inferior condition/in the same condition) the responsibility to donate money for this cause:"; 1="Not at all" to 7="Very much").

Study 1 was replicated. Additionally, a two-way ANOVA on donation attribution responsibility revealed a significant interaction ($F_{(2,179)}$=5.08;p<.001;η_p^2=.05). Upwards attribute donations responsibility as being higher to others (M_{self}=2.86;M_{others}=3.84; $F_{(1,179)}$=4.55;p=.03;η_p^2=.025) and downwards attribute donations responsibility as higher to the self (M_{self}=3.56;M_{other}=2.53;$F_{(1,179)}$=5.34;p=.02;η_p^2=.03). We further investigate the mediation role of donation attribution responsibility (model 8; 10,000 samples; Hayes, 2018). We found a positive conditional indirect effect when combined other-perspective and upward comparison (β=4.96, CI=1.49 to 10.74) and a negative conditional indirect effect when combined other-perspective and downward comparison (β=-4.96, CI=-9.77 to -1.14), both influencing monetary donations. These results show that upwards attribute higher responsibility to others and downwards attribute higher responsibility to the self. Although there is higher self-responsibility, downwards don't assign higher monetary donation to the self.

Study 3 further investigates self-other monetary donation. Since socioeconomic positions are often associated with meritocratic beliefs (McCoy and Major, 2007), we suggest that our results about monetary donations may be related to these beliefs. Therefore, participants (n=243) followed similar procedures as Study 1. Meritocracy was measured using a scale from Day and Fiske (2017), 1="Strongly Agree" to 10="Strongly Disagree" (α=.94).

We conducted a moderating analysis (model 3; 10,000 samples; Hayes, 2018) and found a three-way interaction on monetary donations (β=19.82, CI=7.25 to 32.40). Specifically, upwards (vs. downwards) will reduce (vs. increase) self-monetary donation when meritocracy is low (β=-30.8479; p<.001). Under high meritocratic beliefs, downwards will not judge they should donate more money when compared to upwards (β=6.6277; p=.741). For both high and low meritocracy beliefs, upwards will always assign to others higher monetary donation ($\beta_{low\_meritocracy}$=45.9011, p<.001; $\beta_{high\_meritocracy}$=27.1279, p<.01). These findings demonstrate that when contrasted self-perspective and downward comparison, there will be a higher donation only when the meritocracy is low; when meritocracy is higher, downwards believe they do not need to donate more money to charity.

Study 4 uses World Values Survey data. We applied a socioeconomic status as our independent variable (1="Lower class" to 5="Upper class"). As a dependent variable, we analyzed the responsibility to provide for everyone (1="People should take more responsibility" to 10="The government should take more responsibility") and the agreement with income inequality (1="Incomes should be more equal" to 10="We need larger income differences as incentives"). Additionally, we compute volunteering by using nineteen actions (0="Not belong/answered"; 1="Belong"; e.g., unpaid work to human rights). Results show that individuals in low socioeconomic status attribute to the government the obligation to provide for everyone (β=-.301, p<.05; r=-.101). There was also a weak effect of higher socioeconomic status assigning to themselves a higher responsibility to volunteer (β=.003, p<.01; r=.005). Finally, we found that individuals in a higher socioeconomic condition are more favorable to income inequality (β=.255, p<.01; r=.083).

Our findings theoretically contribute to research on the impact of social class and prosocial behaviors, showing that under the socioeconomic comparison spectrum, consumers make distinct inferences about how self and others should prosocially behave. Felling in a lower position decreases self-responsibility and self-prosocial action, attributing the responsibility to others in a higher position. Although the wealthier attribute to themselves a higher responsibility for prosocial behavior, they don't judge they should donate more money. They only donate more money when they have low meritocratic beliefs.

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Decisions to Reject Lead to Loss-Insensitivity

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EXTENDED ABSTRACT

Whether between price and quality, risk and reward, or business and pleasure, making tradeoffs is endemic to much of consumers' decision making (Simonson and Tversky 1992; Bettman, Luce, and Payne 1998). Such tradeoffs necessarily often entail weighing losses in some attribute against gains in another, and in keeping with loss aversion (Kahneman and Tversky 1979), consumers often place greater weight on the attributes on which they stand to lose rather than gain (Tversky and Kahneman 1991). The present research highlights that this impact of loss aversion is mitigated or even reversed when consumers evaluate tradeoffs with the goal of rejecting rather than accepting an option from their choice set.

Framing the same decision as either a task of accepting one option from a set versus rejecting all but one option from the same set can systematically change consumers' preferences (Shafir 1993). For instance, past research has documented that decisions framed as rejection (vs. acceptance) lead consumers to be more indulgent (Dhar and Wertenbroch 2000) and less discriminating (Park, Jun, and MacInnis 2000). Explanations for such preference reversals often hinge on the presence of an "enriched option" characterized by high variance attributes such that consumers can identify strong reasons both for acceptance and for rejection, thus making this option more likely to be identified in both cases (Shafir 1993). Absent an enriched option, a similar pattern can arise for options which are more affectively charged or salient to the consumer (Dhar and Wertenbroch 2000).

The current research argues that in decisions requiring tradeoffs between losses on some attribute and gains on another, the presence of loss aversion effectively creates an enriched option as a consequence of heightening the sensitivity to and salience of the option which minimizes losses. For example, in a financial decision between a high risk/high reward option and a low risk/low reward option, the low risk option (which minimizes potential losses) will draw the most attention. In an accept frame, this option tends to be chosen because it is superior on the salient dimension of losses. In a reject frame, this option is again more salient, however the process of evaluating an option for rejection subsequently entails elaboration on preference-inconsistent (Laran and Wilcox 2011) and negative attributes (Shafir 1993) of this option. Thus, a rejection frame should draw increased attention to the unappealingness of the low reward (i.e., minimized potential gains). In conjunction with past evidence that rejection of quality attributes is more difficult than rejection of price attributes (Park et al. 2000), this additional attention to the drawbacks of the low risk/low reward option will increase the likelihood of it being rejected. As a result, loss aversion will effectively lead to riskier or otherwise more loss-insensitive decisions in a rejection frame compared to an accept frame.

What follows are three studies intended to demonstrate the existence of this preference reversal in both risky and riskless decision contexts.

STUDY 1

This initial study aimed to demonstrate the core claim that framing a decision as a rejection (vs. acceptance) would lead consumers to make decisions less consistent with loss aversion. Specifically, we looked at financial decision making, and predicted greater preference for risk under the rejection frame.

Methods

An online survey was completed by 497 undergraduate business students (49.1% female, mean age = 19.6). The study used a single factor (Framing condition: accept vs. reject) between-subjects design.

Participants first completed a questionnaire which included an item on self-perceived risk tolerance (whether they saw themselves as "generally a person who tends to take risks," rated from 1="Not at all" to 7 ="Very much"). Participants were then told to imagine that they had the opportunity to invest in one of two stocks: Company A, identified as "moderate risk," or Company Z, identified as "high risk." In the accept condition, participants were asked "in which of the two companies would you prefer to invest?" while in the reject condition, they were asked "in which of the two companies would you prefer NOT to invest?" The stimuli were adapted from Samuelson and Zeckhauser (1988), but were adjusted so that the expected return was equal between the stocks. Company A was described as "Moderate risk: Over a year's time, this stock has a .5 chance of increasing 30% in value, a .2 chance of being unchanged in value, and a .3 chance of losing 15% in value." Company Z was described as "High risk: Over a year's time, this stock has a .4 chance of increasing 90% in value, a .2 chance of being unchanged in value, and a .4 chance of losing 60% in value." Decision times were recorded in order to control for any differences in depth of processing (Sokolova and Krishna 2016).

Results

Participants were coded as having made a risky choice if they indicated the high risk option in the accept condition or if they indicated the low risk option in the reject condition. Consistent with our predictions, a binomial logistic regression found that participants preferred the riskier option more often in the reject condition (46.77%, SE = 3.17%) than in the accept condition (33.73%, SE = 3.00%; b=0.55, z(495)=2.95, p<.004).

The effect is robust when controlling for decision time (b=0.55, z(494)=2.95, p<.004), and decision time did not vary between the framing conditions (b=1.46, z(494)=0.20, p=.151) suggesting that the effect cannot be attributed to differences in depth of processing.

The effect is also robust when controlling for risk tolerance (b=0.54, z(494)=-2.87, p<.005), with participants who self-reported having higher risk tolerance also more likely to make a risky choice (b=0.24, z(494)=3.92, p<.001). An interactive model shows that the linear effect of risk tolerance on risky choices is moderated by the reject frame (risk tolerance: b=0.06, z(493)=0.79, p=.432, interaction: b=0.44, z(493)=3.34, p<.001) while rejection remains a strong predictor of risky choice (b=2.56, z(493)=3.99, p<.001). Decomposing this interaction illustrated that in the accept frame participants' risk tolerance predicted their choice of the high risk option (b=0.51, z(247)=4.78, p<.001) but in the reject frame there was no effect of risk tolerance (b=0.06, z(246)=0.79, p=.432). Planned comparisons examining participants whose risk tolerance was ±1 SD from the mean reveal that while risky choice was comparable between accept and reject frames among participants high in risk tolerance (b=0.09, z(495)=0.48, p=.630), rejection led to significantly riskier choice among participants low in risk tolerance (b=0.58, z(495)=2.39, p<.018). These results imply that the preference reversal between the accept and reject frames is largely driven by participants who were prone to perceive the risky decision as more aversive. This provides

initial indirect support for our claim that loss aversion is the root cause of this reversal.

STUDY 2

This study aimed to directly test the prediction that a rejection frame leads to greater preference for risky options among consumers who have a greater aversion to risk. We argue that because it increases the salience of the lower risk option, loss aversion effectively creates the environment necessary for the preference reversal to arise. Thus, mitigating the experience of loss aversion should attenuate the observed effect.

To test this, we manipulate participants' reference state to either activate or blunt the experience of loss aversion. By telling participants that they are already in a high risk state, we should magnify aversion to losses and replicate the effect observed in study 1. On the other hand, by telling participants they are in a low risk state, we should blunt aversion to losses and lead to risk indifference in both the accept and reject frames.

Methods

An online survey was completed by 609 undergraduate business students (50.4% female, mean age = 19.9). The study used a 2 (Framing condition: accept vs. reject) x 2 (Salient attribute: losses vs. gains) between-subjects design.

Participants completed the same financial decision choice as in study 1, but with a more elaborate cover story (modeled after Samuelson and Zeckhauser 1988). They were asked to suppose that they had recently acquired a sizeable portfolio of cash and securities, and had to decide whether to maintain or adjust it. Participants in the high risk state (vs. low risk state) condition were told that the portfolio was rated as high (low) risk. Participants were then given the task to accept or reject between maintaining investment in high-risk Company Z (moderate-risk Company A), or switching to moderate-risk Company A (high-risk Company Z).

Results

Replicating study 1, a binomial logistic regression found that participants preferred the riskier option more often in the reject condition (51.59%, SE = 2.98%) than in the accept condition (35.05%, SE = 2.63%; b=0.68, z(605)=4.11, p<.001). Putting participants in a reference state of high or low risk had no effect (b=0.00, z(605)=0.01, p=.992), but there was a significant interaction between framing and reference conditions (b=0.67, z(605)=2.02, p<.043). Planned comparisons revealed that under high risk, the riskier option continues to be preferred more often in the reject frame (55.71%, SE=4.08%) than the accept frame (31.25%, SE=3.68%; b=0.51, z(607)=4.29, p<.001), but under low risk, this effect goes away (reject=47.01%, SE=4.33%; accept=38.60%, SE=3.73%; b=0.17, z(607)=1.48, p=.138). See figure. This is consistent with an explanation wherein greater loss aversion entails risk-insensitivity under a reject frame.

STUDY 3

Study 3 extends the observed preference reversal into a riskless domain, thus demonstrating that rejection frames reduce loss aversion more generally. We used a decision task from Tversky and Kahneman (1991) in which participants traded-off between two job offers, one of which was superior in the attribute of commute time while the other was superior in the attribute of social interaction. In keeping with Dhar and Wertenbroch (2000), we label these two attributes as utilitarian and hedonic respectively.

Methods

An online survey was completed by 614 undergraduate business students (54.6% female, mean age = 20.1), all of whom had recently completed or were getting ready to begin a co-op internship as part of their education. The study used a 2 (Framing condition: accept vs. reject) x 2 (Reference point: utilitarian vs. hedonic) between-subjects design.

Participants were presented with a decision task adapted from Tversky and Kahneman (1991) in which they were instructed to imagine that they were completing a co-op training job and were considering two full-time offers that meaningfully differed from each other and the training job only in terms of social interaction and commute time. The utilitarian option offered a 20 minute commute and had "limited contact with others," while the hedonic option had a 60 minute commute and was "moderately sociable."

In the utilitarian reference point condition, participants were told that their current job had a 10 minute commute and had been "isolated for long stretches" (thus, the two choices were both inferior on the utilitarian attribute of commute time, but superior on the hedonic attribute of social interaction), while in the hedonic reference point condition they were told that their current job had an 80 minute commute and "much pleasant social interaction" (thus, the two choices were both inferior on the hedonic attribute of social interaction, but superior on the utilitarian attribute of commute time). Because losses loom larger, Tversky and Kahneman (1991) find that participants given the utilitarian reference point tend to choose the job superior in the utilitarian attribute (to minimize losses in commute time) while participants given the hedonic reference point tend to choose the job superior in the hedonic attribute (to minimize losses in social interaction).

Participants were presented with this decision task and asked which job offer they would accept or reject based on framing condition.

Results

Replicating our prior findings, a binomial logistic regression found that participants in the accept frame tended to prefer the options which minimized their losses (60.73%, SE=2.69%) while participants in the reject frame tended to prefer options which maximized their gains (57.24%, SE=2.95%, b=0.73, t(612)=4.42, p<.001).

An interactive binomial logistic regression examined the choice share of the utilitarian versus hedonic focal option. There was a significant negative effect of the reference point such that participants in the utilitarian (hedonic) condition tended to choose the option which maximized their gains (b=-0.58, z(610)=-2.41, p<.016), a marginal effect of the framing condition suggesting that rejection increased preference for that option (b=0.42, z(610)=1.81, p<.071), and a significant interaction (b=-1.46, z(610)=-4.43, p<.001). Decomposing this interaction reveals that participants in the accept condition were more likely to prefer the option which reduced their losses relative to the given utilitarian or hedonic reference point (b=0.44, z(612)=3.87, p<.001). However, participants in the reject condition were more likely to prefer the option which maximized their gains relative to the given reference point (b=-0.29, z(612)=-2.43, p<.016).

Discussion

The results of three studies suggest that consumers exhibit less sensitivity to losses when making decisions to reject rather than accept an option. Studies 1 and 2 demonstrate this pattern in the domain of financial decision making wherein a reject frame led to insensitivity to risk relative to an accept frame. Each of these two studies

provides evidence that this preference reversal is more pronounced when loss aversion is stronger. Study 3 extends these findings to a riskless tradeoff between utilitarian and hedonic attributes, and finds that a reject frame reverses the choice pattern predicted under loss aversion.

This research adds to the literatures on consumer decision making in the domains of both reference-dependent and tradeoff-based choice, and may help to shed light on a variety of disparate preference reversals and other consequences that result from framing decisions as rejections. This has natural implications for marketers seeking to encourage greater risk-taking or reduced loss aversion among consumers. Future research could explore how the relationship between rejection and loss aversion impacts other areas of decision making, such as the endowment effect. The work also implies that loss aversion, as a potent affective signal to consumers, may play other surprising roles as a source of salience in decision contexts.

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Ethical Consumption: Status Inferences and Sexual Cues

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EXTENDED ABSTRACT

Does the consumption of ethical products convey social status? To answer this question, one must look into the traits signaled by ethical consumption.

If, as we expect (Griskevicius et al., 2010), ethical consumption signals prosociality, then women are more likely than men to confer status to ethical consumers, given the importance of this trait for status hierarchies in women's eyes (Megargee, 1969).

The consumption of ethical products may lead to inferences of lower social dominance (i.e., competitiveness, aggressiveness) as ethical products are seen as softer than their conventional equivalent (Luchs, Naylor, Irwin, & Raghunathan, 2010). If men infer lower social dominance from ethical consumption, we should predict that ethical consumption decreases or, at least, does not increase status in men's eyes, given the centrality of social dominance for status competition among males (Kirkpatrick et al., 2002).

From an evolutionary perspective, the presence of a sexually attractive member of the opposite sex works as a 'mating cue', priming a goal to engage in short-term mating (Roney, 2003), and triggering intrasexual selection and intersexual selection. Sexual cues have been found to cause men to seek status mainly through dominance rather than through prestige (Kirkpatrick et al., 2002) by behaving dominantly and aggressively toward other males (Ainsworth & Maner, 2014; Griskevicius et al., 2009, Study 2). The good genes sexual selection theory (Gangestad et al., 2007) suggests that women prefer dominant men as sexual partners (Birnbaum et al., 2014; Egan & Angus, 2004). It is thus likely that men will decrease their preference for ethical products when primed with sexual cues.

Study 1

Method

Participants (N = 131) were recruited to participate in a 2 (observer sex: male vs. female) x 2 (consumption: ethical vs. conventional) between-subject design. In the conventional consumption condition, participants were first introduced to H&M. Participants in the ethical consumption condition were presented with the 'H&M Conscious Collection'. Following this, participants rated (1-5 scale) the extent to which various traits applied to the consumer.

Results

Ethical consumption led to a significant increase in perceived status ($p = .03$). The main effect on perceived status was fully driven by females' perception ($p = .02$), whereas ethical consumption had no effect on status perception in males ($p = .56$). For perceived dominance, there was no significant main effect of ethical consumption ($p = .45$). As expected, consuming ethical products lead male participants ($p = .088$), but not female participants ($p = .57$), to rate the ethical consumer as marginally less dominant than the conventional consumer.

Study 2

Method

Heterosexual students (N=374) were randomly assigned to an ethical consumption vs. conventional consumption condition. Pictures of ten items supposedly drawn from an abandoned bag appeared on a full A4 page. Participants in the ethical condition saw the same products as those in the conventional condition, with the addition of three ethical brands. Then, perceived dominance and social status were measured (1-7 scale).

Results

Whereas male judges' perception of social status was not affected by ethical consumption ($p = .66$), female observers perceived the ethical consumer's status as significantly higher ($p = .05$) than the conventional consumer. Inferences of dominance decreased in the ethical condition ($p = .01$). This main effect qualified for a significant interaction with viewer's sex ($p = .03$): ethical consumption leads to a decrease in perceived dominance in male observers ($p = .001$), but not in female observers ($p = .84$).

Study 3

Method

Participants (N=151) were randomly assigned to a 2 (context: sexual cues vs. control) full-factorial design. Participants were either shown pictures of sunny streets (control condition) or revealing pictures of members of the opposite sex (sexual cues condition). We then asked participants to indicate their purchase intentions of products with a fair trade label on a 7-point scale.

Results

As expected, the sexual cues had a marginally significant negative effect on men's purchase intention of fair trade products ($p = .09$), but no effect on women ($p = .53$). As expected, sexual cues significantly decreased the preference for fair trade products for single men ($p = .03$), but not for men involved in a romantic relationship ($p = .77$).

Study 4

Method

Participants were heterosexual males (N=93), who were randomly assigned to a two-cell design: sexual cues vs. control. We manipulated sexual cues by varying a female confederate's outfit and attitude (see Janssens et al., 2011).

The confederate informed participants that they would receive a chocolate bar as a compensation for their participation in the study, to choose between a conventional brand and a fair trade brand. Participants came to the front of the lecture hall to collect their questionnaire and choose a chocolate bar from a basket held by the confederate. We subsequently measured participants' stated preference for ethical brands.

Results

56% of participants chose the fair trade brand in the control condition, compared to 33% in the sexual cues condition ($p = .03$). As expected, single male participants were less likely to choose the fair trade chocolate when exposed to the sexual cues ($p = .05$), but participants in a relationship were unaffected ($p = .28$). Men in the sexual cues condition expressed a significantly lower self-stated preference for the ethical brands ($\alpha = .79$) than men in the control condition (p = .04). Here again, single participants ($p = .08$), but not participants in a relationship ($p = .52$), decreased their self-reported preference for ethical brands.

General Discussion

Women, but not men, associate ethical consumption with social status. Conversely, men, but not women, decrease their inferences of social dominance when they see someone consuming ethical products rather than conventional products. Given the importance of status and dominance hierarchies for males' fitness (Sundie et al., 2011), these inferences of limited social benefits in males suggest that they would be less likely than females to prefer ethical products. We then explore a context, sexual cues, in which the reduced dominance associated with ethical consumption leads men (but not women) to shun ethical products.

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Ruling Through the Body: The Evolution of Male Grooming in China

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EXTENDED ABSTRACT

Extant marketing and consumer research has long identified women's body as a site of political and social struggle (Bettany et al. 2010; Maclaran 2015; Stevens & Maclaran 2007). This is particularly the case within the feminist literature where there is continued ambivalence as to whether an escape from the material body is empowering or disempowering for women seeking greater gender equality (Bristor & Fischer 1993; Stevens & Maclaran 2007). The body was the focus of second wave feminism in the 1970s, mainly concerned with issues such as fertility and abortion. Second wavers fought to obtain legal and social equality of women in part by refuting femininity – they are often negatively stereotyped as the "ugly feminist" (Scott 2006). As a backlash to the rejection of femininity, the new generation of third wavers (e.g., lipstick feminism) seeks empowerment – politically, socially and psychologically – through beauty practices such as the wearing of makeup, fashion, fitness regimes and sensually-appealing clothing (Liu et al. 2016). Yet, such a movement has been increasingly criticized as leading to the current hypersexual culture and a return of sexism (Stevens & Maclaran 2012; Walter 2010). In sum, there is a persistent emphasis in the literature (and perhaps rightfully so) on studying women's body and its relevant consumption/beauty practices as a means of molding identity and pursuing female emancipation in personal and political terms. Such an emphasis however risks a return to the Cartesian male/female, mind/body dualism, reinforcing the assumption that men's body is liberated from sociocultural or political constrains and freed from the negotiations of power in gender relations. In this study, we examine the development of the interplay between male grooming and portrayals of masculinity in the media in Chinese history since the year 1949 and in modern times. We show how the construction of hegemonic masculinity operates over time, as the male body becomes a site of political 'subjection', inscribed by systems of state control.

Popular media (e.g., film and print advertising) plays a crucial role in shaping gender discourses (Schroeder & Zwick 2004), and in reflecting idealized gender images in specific social and ideological contexts (Kates & Shaw-Garlock 1999). These images could influence one's self-perceptions (Martin & Gentry 1997) and even work as panoptic mechanisms to induce one's self-monitoring (Duncan 1994). We argue that China serves as a rich context for exploring the politicized nature of the body as the print and broadcast system has long been the state's tool to disseminate knowledge around 'appropriate' ways of thinking, talking, grooming consuming and behaving (Bandurski 2015). In addition, we have witnessed several drastic cultural, political and economic changes in contemporary China (Hung & Li 2006). We demonstrate how these changes influence the ways in which hegemonic masculinity has been constructed, portrayed and transformed in the Chinese print and broadcast system from 1949 to the present day.

Following theories of semiotics and visual rhetoric (Barthes 1977), we conducted an extensive review of advertisements in the People's Daily since the year 1949. The People's Daily is chosen because it has been the Chinese government's official newspaper since 1949, and thus it closely reflects the ideological changes of the state (Zhao & Belk 2008). Our findings point to four stages of state-sponsored construction of hegemonic masculinity and how the body/male grooming plays an imperative role in constituting this discourse:

1. Socialist Worker Masculinity (since 1949): when the People's Republic of China first founded in 1949, there was a strong emphasis on production and the importance of status elevation for the workers. Becoming a factory worker to participate in the development of the state's economy was portrayed as the ideal citizen at that time. Chinese men working in the assembly line, looking frugal and dressed in collared shirts and loose dungarees were the dominant images in People's Daily.

2. Military Masculinity (Since 1965): during the period of Cultural Revolution, Chinese government became devoted to endorsing the manifesto of the communist party and encouraged Chinese citizens to participate in the socialist revolution and the fight against capitalism. At the time, ads in people's daily typically portrayed men and women in uniforms serving as the Liberation Army. People wearing the uniforms were seen as the most reliable socialists and harboring the strongest revolutionary spirit. They became a cultural icon through which the state advocates criticality of serving the army above all.

3. Entrepreneur Masculinity (Since 1989): during the 'middle' stage of Reform, the state sought to participate in the world economy as it underwent the reform of its socialist economy. In the 1990s, the reform focused on transforming the state-owned enterprises into privately owned corporations. At this time, ads in People's Daily concentrated on depicting men as industry leaders and in business attires. Women were commonly shown as supporting actors (e.g., secretaries) with a well-groomed appearance.

4. Soft Masculinity vs. Chinese Dream Chaser Masculinity (since 2000): in the era of Globalization, femininity and masculinity became more hybrid and diversified (Song & Lee 2010). With women becoming more highly educated and financially independent, we started to see ads in People's Daily portraying men in casual clothing and in family settings acting as husbands and fathers. With the global metrosexual trend, we also started to see ads with men wearing makeup and more feminized menswear. Yet, with Xi Jinping's leadership that proposed the importance of achieving the Chinese Dream with a focus on the revival of nationalism, we at the same time witnessed the state's efforts in restraining the metrosexual trend by banning male images that are perceived overly feminine. There is also a resurgence of images focusing on representing men in business attires as well as in socialist uniforms who shoulder strong national and social responsibilities.

Our findings contribute to the lack of research (Hearn & Hein 2015) into understanding men's structural position(s) within the gender system called patriarchy and how the male body is also politicized and transformed to shape gender identity in the marketing and consumption context over time.

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How Religiosity Shapes Coupon Usage

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EXTENDED ABSTRACT

While coupon is a widely used promotional tool, marketers face the challenge of low redemption rates. For instance, only 0.5% to 2% of free standing print inserts are actually used by consumers (Code-Broker 2018). In prior studies, motivations to redeem coupons have mainly included economic factors such as household characteristics, price sensitivity, and value consciousness (Blattberg et al. 1978; Lichtenstein, Netemeyer, and Burton 1990; Narasimhan 1984), whereas sociocultural drivers have not been fully explored. In the present research, we fill this gap by investigating a previously underexplored factor—religiosity, which is defined as the intensity to which an individual affiliates, participates, and believes in religion (Mathras et al. 2016). Indeed, religion is an important part of daily life for many people in the United States, with more than 70% of Americans identifying themselves as Christians (Pew Research Center 2016). In addition to being of theoretical interest, religiosity has practical benefits given that firms can use relatively simple measures of religiosity to predict coupon usage. With a focus on consumers' attitudes toward coupons, the present research investigates whether and why religiosity can influence decisions in secular contexts.

In particular, we propose that consumers high in religiosity will be more likely to make benevolent inferences and thereby they are more likely to redeem coupons. This premise is grounded in prior research revealing an overlap between religiosity and social trust (Bègue 2002; Dingemans and Van Ingen 2015). Most religious ideologies incorporate values of social solidarity, and thus consumers high in religiosity are likely to extend social trust from close others to distant others (Norenzayan and Shariff 2008). We argue that religious consumers tend to have a more positive perception of others in general (including marketers, firms, and retailers). Compared to consumers low in religiosity, religious consumers are more inclined to trust firms that offer coupons and have benevolent inferences (e.g., to help save money). In contrast, consumers low in religiosity may tend to believe that firms offering coupons have manipulative intents, and may not have customers' best interests in mind. Accordingly, consumers high in religiosity will have more favorable attitudes toward coupons, and will be more likely to redeem coupons than consumers low in religiosity.

Study 1. The purpose of study 1 is to test our proposition that religious consumers are more interested in coupons compared to non-religious consumers. We used Google Trends data to test this proposition. Google searches are strongly related to the interests of people who perform the search, and aggregated search scores from Google Trends provide an indicator for an area's interest in a certain topic (Goel et al. 2010). Accordingly, we operationalized the construct of coupon usage by using state-level search index from Google Trends. The predictor of religiosity was state-level religiosity index from Gallup. Additionally, we collected other state-level demographic variables. Google Trends coupon scores were regressed on religiosity and demographic variables. As expected, people in more religious states were more likely to search information about coupons.

Study 2 aims to further test our proposition about the impact of religiosity on consumers' attitudes toward coupons using a different source, namely Twitter data. According to our theorizing, we expect to observe that religious Twitter users will follow more Twitter coupon accounts than nonreligious users. For the construct of religiosity, we used religion-related identity key words included in users' public self-description biography. Specifically, we identified the following religion-related words: God, Jesus, Christian, church, and bible. Users were considered as religious if their description included one of these key words. We collected followers from 10 most popular coupon Twitter accounts through Twitter API; the coupon attitudes were measured by the number of Twitter accounts each user followed (i.e., the more accounts they follow indicated more favorable attitudes). Negative binomial analysis was employed to analyze the data, and the results suggested that religiosity significantly predicted coupon usage.

Study 3. The purpose of the study is twofold. The first purpose is to provide a test regarding the impact of religiosity on individual consumers' coupon usage. The second purpose is to examine the proposed underlying mechanism of benevolent inference. Participants were recruited from MTurk. Measures included the frequency of using coupons, religiosity, and the proposed mediator of benevolent inference. The simple linear regression of coupon usage on religiosity indicated that religiosity was positively correlated with coupon usage. We also examined the potential impact of demographic variables, and the main effect held after controlling for these variables. Mediation analysis confirmed our proposed mediator of benevolent inference.

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Believe the Hype: How Resale Monetized Desire

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EXTENDED ABSTRACT

Value gains for used products are typically reserved for assets, such as houses and high art. It is puzzling, then, that mainstream products are acquiring value between the moment they leave the store and the moment they are listed online by consumers who bought them. To address this conundrum, we ask: How can resale create value for mainstream products?

Our theoretical insight is as follow. Our findings present how the resale market has been built on a network of desire (Kozinets, Patterson and Ashman 2017) in such a way to create an infrastructure of desire-valuation. Such an infrastructure is composed of an assemblage of actors and objects, such as communities, celebrities, consumer-influencers, and brands; hashtags, social media networks, bots, and apps; consignment and second-hand stores and online platforms; and events such as fashion shows, sports events, music shows, and product launches.

Our findings emerge from an extensive qualitative dataset composed of field notes, archival data, and interviews. To provide the theoretical grounding from which our findings emerge, we briefly review how resale has previously been theorized. We then give a quick overview of our findings and the implications for consumer behavior and market system dynamics.

THEO1RY

Apart from assets, i.e., a specific product class characterizing goods that appreciate over time (Mandel 2009), we identified three main bodies of research that have looked at second-hand products and can be mapped on a temporal sequence: vintage products, used products, and flipped products. The exchange of each of these three categories of products follows a different logic. First, the purchase of vintage products is tied to nostalgia, knowledge, and desire to differentiate oneself from the crowd (Cervellon, Carey and Harms 2012). When well-kept, vintage products can appreciate if they are rare and exclusive. Second, the purchase of used goods is typically associated with other dynamics and motivations. Such goods are often seen as being contaminated by previous owners (Argo, Dahl and Morales 2006), and shoppers are conceptualized as looking for a bargain (Bardhi and Arnould 2005). Importantly, used good typically sell below their initial retail price. A last category of second-hand products is for those that are rapidly flipped (Courty 2003).

Although the sneaker resale market features all three types of products, such as the vintage 1985 Jordan 1 OG Royal (US$ 11500), the used 2016 Adidas Ultra Boost 2.0 Bronze Medal (US$156), and the flipped 2019 Nike Mars Yard Overshoe Tom Sachs (launched at US$550 and selling for US$2000 the next day) , our interest is in a fourth, yet unexplored, category of second-hand products: i.e., products that are not vintage, that might be used but gain value over time, and for which the heightened valuation cannot solely be explained by their rarity and exclusivity as in the case of flipped products.

FINDINGS

Our findings show how technologies are used to transform desire into value, and how the creation of an infrastructure of desire-valuation brings about market-level transformations. Our use of infrastructure rather than network aims at emphasizing the creation and accumulation of material and digital interfaces that support desire-valuation. The transformation of a network of desire into an infrastructure of desire-creation led to the emergence of four transformations in the market: 1) the materialization of desire into value; 2) the transformation of consumers into consumer-reseller; 3) the facilitation of conversion of capitals; and 4) the heightening of consumer-based competition to access goods.

By the materialization of desire into value, we refer to a set of processes and objects that support the explicitation of desire associated with sneaker models. A second transformation is that of the transformation of consumers into consumer-resellers. This dynamic has expanded beyond sneaker consumers as resell platforms reached other markets, as Mau of online news website Fashionista (Dec. 20th, 2018) argues: "Fashion fans are increasingly thinking about luxury purchases in the same way sneakerheads have been thinking about sneaker purchases for some time: with resale value in mind." A third transformation is to facilitate the conversion of status, skills and knowledge, and social connections into economic gain. A last transformation at the heart of the dynamics of the sneaker resale market relates to how the actions of consumers and brands heighten competitive dynamics regarding access to new pairs of sneakers, and the emergence of new products and processes to address this.

DISCUSSION

We argue that the novel development associated with the creation of networks of desire (Kozinets, Patterson and Ashman 2017) and infrastructures of desire-valuation addresses an important conundrum for the marketing of mainstream products. Markets such as street wear and sneakers partly function on the creation of desire for products. Street wear brands have used exclusivity and rarity to do so. But in order to maintain exclusivity and rarity, brands need to release a smaller number of products. Rarity and the incapacity to sell products at high prices, thus limit the potential to financially capitalize on desire. The decentralization of supply away from brands, through the resale infrastructure, allows greater price elasticity that better match desire (demand) and price (supply).

Mass product brands, such as Adidas and Nike, have capitalized on this dynamic by artificially and continuously releasing 'limited' edition sneakers, at the tune of 10 to 15 product launches per week. Sneaker models associated with successful launches then become in high demand on the resale market and contribute to brand valuation. And successful product launches are used as indicators by consumers to predict future demand, facilitating sales for sneaker brands.

More, sneaker brands and retailers are now investing in the websites and technologies that compose the infrastructure of desire-valuation, such as Foot Locker recently investing 100$ million in GOAT.com, to further capitalize on this phenomenon. These points to important transformations happening in how brands manage their stocks, product releases, and relationships with their customers.

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Steer Away from Joneses-The Role of In-Group
Versus Out-Group Sources on Conspicuous Consumption

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EXTENDED ABSTRACT

Prior research has demonstrated that people often seek out and use information from others to optimize their consumption decisions (Shugan,1980; Gino and Moore, 2006). In this process, the source of this information influences how much it is utilized by the recipient. Recommendations from close-others have greater impact on consumer's decision-making (Duhan et al, 1997). The reasons for this are obvious: Compared to distant-others, close-others are more similar to us (Mashek & Boncimino, 2003). This similarity also translates into similar preferences in consumption domains (Childers & Rao,1992).

But will consumers always prefer recommendations from close others? In the present research, we propose that, people may not always follow close others. We argue that, in the case of conspicuous consumption, people will display less conformity to close-others.

Oftentimes, consumption choices are guided by extrinsic social-signaling motivations (Kasser & Ryan 1993). Research has demonstrated that under certain conditions nonconformity can be socially beneficial (Snyder & Fromkin, 1980). For instance, adhering to a deliberately unconventional dress code can be inferred as status enhancing by the observers (Bellezza et al. 2014). Some consumers with cultural capital deliberately choose inconspicuous luxury product designs to deviate from mainstream consumers, who are more likely to choose conspicuous brand logos (Berger and Ward, 2010). Divergence from popular choices is also noticeably higher when consumers have impression management motives (Ariely & Levav 2000; Ratner & Kahn 2002). These behaviors are further exaggerated in the presence of others (Linder, Corwin, and Cialdini 1977; Ariely and Levav 2000). In fact, people go to great lengths to hide the fact that their behavior has been influenced by their peers (Nolan, Schultz, Cialdini, Goldstein and Griskevicius, 2008).

We extend this logic of beneficial social nonconformity to the context of in-group (vs. out-group) influences. We argue that lower conformity to close others, by deviating away from their recommendations or actions, can have status-enhancing consequences. Therefore, consumers will relatively ignore information from close-others in conspicuous consumption contexts. However, close others' references may not always be influential.

When consumers have high extrinsic motivation for status-enhancement they may diverge from the recommendations of close-others. But this does not imply that the advice from close-others has no value. After all, being similar to self, advice from close-others is likely to be more intrinsically utilitarian.

We propose a situation-specific hypothesis of when consumers are more likely to rely on recommendation of close-others, and under which conditions are they more likely to ignore close-others.

We posit that the crucial situation moderator will be the transparency of consumption. When consumption is confined to the privacy of one's own home or in isolation of others, there are fewer opportunities for social signaling. Thus, extrinsic signaling motivation is lower, and consumers will primarily be motivated by intrinsic utilitarian goals. Under such settings they will adhere to the recommendations from close-others. However, under socially visible consumption situations, such intrinsic motivation will be marginalized in favor of extrinsic signaling goals. Thus, in conspicuous consumption settings, in pursuit of displaying divergence, consumers will be less likely to rely on recommendations from close-others.

> **Hypothesis 1** *Consumers will be less likely to take advices from close- (vs. distant) others in conspicuous (vs. inconspicuous) consumption situations*

Relatedly, we also propose the underlying process hypothesis that:

> **Hypothesis 2** *Ignoring the advice of close-others in conspicuous consumption settings is driven by the underlying motivation for extrinsic social signaling.*

We test our hypotheses and underlying process in four studies. With a close examination of effects from different reference sources, we build our framework based on consumer's fundamental motives: intrinsic motive and extrinsic motive. We propose that consumers are less conforming to their close others while they try to express their autonomy in extrinsic signaling. The nonconformity effect is enhanced by conspicuous consumption. In study 1, we examine our main hypothesis by asking participants to shop for garden decoration. In particular, we predict that when facing a conspicuous consumption, such as garden decoration, people are less likely to follow their close others' references. In study 2, we replicate our results by using different product categories as conspicuous and inconspicuous consumptions. Study 3 examines the underlying process of consumer's sense of agency in extrinsic signaling by cuing products to satisfy extrinsic motive and intrinsic motive respectively. Finally, we test the role of atypical products as a boundary condition, and further investigate underlying process of sense of agency by using atypical products to satisfy consumer's extrinsic signaling motive.

Our work contributes to the conspicuous consumption literature and the growing WOM literature. We propose consumers may engage in conspicuous consumption by diverging from popular choices of their social in-group.

Our research provides insights for marketing practitioners for their WOM strategy. We demonstrated that receiving reference information from close-others may not be the most effective way of eliciting buying behaviors in all contexts. Specifically, for conspicuous consumption, WOM from distant others may work better in influencing consumers purchase decisions.

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Spicing Things Up with a (Brand) Secret

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EXTENDED ABSTRACT

Both popular culture and academic research propagate the idea that secrets are harmful to relationships (Lane and Wegner 1995, Critcher and Ferguson 2014, Slepian, Masicampo, and Ambady 2014). Nevertheless, marketing practitioners seem to have intuited pleasure where the academic literature has neither forecast nor found it: restaurants like Starbucks have developed "secret menus" (Haq 2017); brands such as Nike have created secret websites (Nike 2018); Sofar Sound offers secret concerts in 429 cities worldwide. The extensive work on consumer-brand relationships (e.g., Fournier 1998; Escalas and Bettman 2005; Swaminathan, Page, and Gürhan-Canli 2007; MacInnis and Folkes 2017; Park and MacInnis 2018) has yet to examine the impact of a secret. Our research explores possible effects a brand secret can have on the consumer-brand relationship. Specifically, in the vein of research on consumer delight (Olivier, Rust, and Varki 1997; Kumar and Pansari 2016), what might increase consumers' interest in and engagement with a brand after commitment is established? Just as normative human relationship narratives typically end with commitment, marketers have traditionally focused on consumer loyalty or habit as the brand relationship end game (Ahluwalia, Burnkrandt, and Unnava 2000; Ahluwalia, Unnava, and Burnkrandt 2001; Wood and Neal 2009, Wood and Runger 2016). Contrary to this trajectory, we predict that a secret will stimulate a brand relationship by leading not merely to new kinds of cognitive and affective engagement but also to behaviors of increased interaction with the brand relationship partner.

Unlike other researchers, we argue that the unique structure of a brand secret lies not in its status as *nondisclosure* (Slepian, Chun, and Mason 2017) but as *selective sharing.* Most secrets are told to at least one other person and last a period of two years (Vrij et al. 2002). Brand secrets are likewise a form of sharing and so comprise a type of communication, not its absence (Lane and Wegner 1995; Perlow and Williams 2003). While people are encouraged to share surprises widely when the time is right (Kelly and McKillop 1996; Rust and Olivier 2000), they are not to share secrets beyond the curated network. Both secrets and loyalty/VIP programs are predicated on information exclusivity; however, the latter are typically affixed to consumer behaviors like spending or the frequency of consumption rather than to special knowledge about the brand as in the case of a secret (Yi and Jeon 2003). Treating secrets as selective sharing thus allows us to see them as conferring exclusivity, defined as insider status, in ways that consumers enjoy (Berger and Ward 2010; Bellezza, Gino, and Keinan 2014).

Relationship status? "It's Complicated"

Popular culture has long held that when commitment makes a relationship feel stale, it is possible to "spice things up" with one's partner. In this context, a committed relationship presents a physiological dilemma in which a stimulation threshold, which demands new options and experiences, can no longer be reached by habit-driven consumption partners (Mogilner, Kamvar, and Aaker 2011). While spicing things up in human relationships is typically talked about as types of activities consumed together (Etkin 2016), we suggest that the primary option for spicing things up in a brand relationship will connote "making things interesting" in the literal, cognitive, sense (Yoon et al. 2006). Secrets are interesting in precisely this way (Davies 2014). Of the four main attributes of interest in compelling foundations theory, secrets possess three: they are centered around human drama, play upon the fear of missing out, and diverge from an anticipated pattern (Pocheptsova, Labroo, and Dhar 2010). Recent studies have shown, furthermore, that difficulty confers interest (Labroo and Pocheptsova 2016) and that complexity spurs engagement (Lovett, Peres, and Shachar 2013). We suggest that the colloquial relationship status "it's complicated" means that the relationship has been rendered more interesting and deep in ways that are not captured by conventional descriptions of a relationship and coin a new term, "relationship complication," to describe its assumption through a secret of depth and complexity and consequently the feeling of being more exciting/fun (Schmitt 1999; Mourey, Olson, and Yoon 2017; Ruan, Hsee, and Lu 2018; Babin, Darden, and Griffin 1994). The positive hedonic sensations associated with complication lead to more excitement about the brand relationship and more positive attitudes toward the relationship partner. These, in turn, cause consumers to interact with the brand partner more, including by making more purchases, following exposure to a secret.

STUDY 1

Procedure and Measures

Two hundred fourteen undergraduates from an eastern university (average age = 21, 59% male) participated in an experiment with a 2-cell between-subjects design (no secret vs. secret). In the no secret condition participants saw the regular Starbucks menu before ordering, and in the secret condition they saw an actual Starbucks secret menu that is currently circulating in the marketplace before ordering. They selected an option, completed a beverage-ordering simulation, and then answered questions designed to capture a mediating variable, brand relationship complication (α = .86): When I think about my relationship with Starbucks now (after my beverage order)… My relationship with Starbucks is more complex than it was before I ordered this beverage (1= strongly disagree, 7 = strongly agree); My relationship with Starbucks is…simple, with few layers (1) to deep, with many layers (7); I feel like my relationship is now more interesting (1= strongly disagree, 7 = strongly agree). We included three manipulation checks (1 = strongly disagree, 7 = strongly agree): 1) The menu was familiar to me (M_{secret} = 2.51 vs. $M_{no\ secret}$ = 3.82, $F(1,211)$ = 30.21, p <.001); The menu made me feel like an insider with special knowledge (M_{secret} = 4.97 vs. $M_{no\ secret}$ = 3.63, $F(1,211)$ = 35.59, p < .001); The menu made me feel more in the know about the brand (M_{secret} = 5.17 vs. $M_{no\ secret}$ = 4.46, $F(1,211)$ = 12.65, p < .001).

Two months later, 187 of the original participants returned to the lab, recalled the study, and were asked to "Think about your experiences at Starbucks since completing the study. First, please describe the thoughts and feelings you've had about Starbucks as you've gone there. Second, please describe in detail the beverages you've ordered at Starbucks since completing the study." Open-ended responses to the first question (brand attitude) were coded by two independent coders blind to the condition for degree of positive or negative thoughts and feelings about the brand, where -3 = very negative, 0 = neutral, 3 = very positive (M = .68; kappa = .98). We then counted the number of beverages ordered since completing the main study (M = 1.31; brand interaction).

Results

We analyzed our results first with one-way ANOVA then with an appropriate multiple mediation test (Mehta, Zhu, and Cheema 2012).

Brand relationship complication. Participants who ordered from the secret menu (vs. those who ordered from the official menu) found the brand relationship significantly more complicated (M_{secret} = 4.02 vs. $M_{no\ secret}$ = 2.94, F(1, 212) = 28.20, p < .01).

Brand attitude

Participants who ordered from the secret (vs. official) menu described having significantly more positive brand attitudes in the past two months (M_{secret} = 1.34 vs. $M_{no\ secret}$ = 0.08, F(1, 186) = 33.62, p < .001).

Brand interaction

Finally, those who ordered from the secret (vs. official) menu reported significantly more beverage orders in the past two months (M_{secret} = 1.67 vs. $M_{no\ secret}$ = .98, F(1, 186) = 5.82, p < .02).

Indirect effects

We sought evidence of the underlying processes through a test of the indirect effects (Zhao, Lynch, and Chen 2010). In our conceptual model, we predicted that a brand secret (vs. no secret) would positively affect brand interaction through increased brand relationship complication and then a more positive brand attitude. Thus, we next conducted a test of mediation using the serial multiple mediator model (Hayes' PROCESS model 6, 5000 bootstrap samples; Hayes 2013) with secret condition, brand relationship complication, brand attitude, and brand interaction. We find support for our conceptual model.

STUDY 2

The objectives of study 2 were to 1) replicate the effect observed in study 1; 2) test whether complication leads to excitement about the brand partner; 3) find out whether the effect on brand attitude emerged immediately and remained positive; and 4) explore the moderator of brand commitment. Thus, study 2 uses a similar longitudinal approach to study 1.

Procedure and Measures

Three hundred undergraduates from an eastern university (average age = 21, 56% male) participated in an experiment with a 2-cell between subjects (no secret vs. secret) x continuous (brand commitment) design. Participants completed commitment measures (1= strongly disagree, 7 = strongly agree; r = .89, p < .01; M = 3.54): I have an established, long-term relationship with Starbucks; I am committed to Starbucks). Brand commitment did not affect the secret condition (p = .28). Then they saw the standard menu; and in the secret condition only, they saw a secret menu about which they overheard a conversation. Next, they answered questions capturing the mediating and dependent variables at time 1. Brand relationship complication was as in study 1 (M = 3.28). We measured brand relationship excitement using the following two items (M = 4.08; r = .64, p < .01): Considering the secret/standard menu makes me more excited about my relationship with Starbucks (1 = not at all, 7 = very much); The menu gave me a sense that Starbucks is fun (1 = strongly disagree, 7 = strongly agree). Next, we coded responses to the following brand attitude question using the same coding scheme as in study 1, "How does the menu make you think differently about Starbucks (if at all)?" (standardized, M = .34, kappa = .99). Finally, we measured brand interaction *intentions* using two items (M = 3.30; r = .41, p < .01): The menu gave me a sense that Starbucks is a brand I could spend more time with (1 = strongly disagree, 7 = strongly

agree); How likely are you to visit Starbucks in the next 24 hours? (1 = not at all, 7 = very likely).

As in study 1, multivariate ANOVA results on manipulation check items indicate that participants found the standard menu more familiar (M_{secret} = 3.40 vs. $M_{no\ secret}$ = 3.98, F(1,296) = 6.81, p = .01), while the secret menu made them feel like an insider with special knowledge (M_{secret} = 4.34 vs. $M_{no\ secret}$ = 3.13, F(1,296) = 39.56, p < .001) and more in the know about the brand (M_{secret} = 4.77 vs. $M_{no\ secret}$ = 4.14, F(1,296) = 11.57, p < .001).

One month later, at time 2, 259 of the original participants returned to the lab and completed a survey capturing a mediator, brand attitude (standardized, M = .46; kappa = .97) and dependent variable, self-reported actual brand interaction (M = 1.03), as in study 1.

Results

Brand relationship complication

One-way ANOVA revealed that participants who ordered from the secret (vs. official) menu found the brand relationship significantly more complicated (M_{secret} = 3.90 vs. $M_{no\ secret}$ = 2.67, F(1, 298) = 59.29, p < .001).

Time 1 and 2 brand attitude measures

A mixed ANOVA analysis to determine whether any change in brand attitude is the result of the interaction between secret vs. official menu and time, and we observe a main effect of condition (F (1, 275) = 42.23, p < .001), a non-significant effect of time (F (1, 275) = .16, NS), and a significant interaction (F(1, 275) = 4.56, p < .05). Examining the simple main effects using one-way ANOVA reveals that those participants who ordered from the secret (vs. official) menu had a significantly more positive brand attitude immediately (M_{secret} = .29 vs. $M_{no\ secret}$ = -.28, F(1, 275) = 36.64, p < .001) and in the month following the main study (M_{secret} = .25 vs. $M_{no\ secret}$ = -.26, F(1, 257) = 17.95, p < .001).

Time 1 and 2 brand interaction measures

One-way ANOVA reveals that those who ordered from the secret (vs. official) menu reported significantly greater intentions to interact with the brand (M_{secret} = 3.52 vs. $M_{no\ secret}$ = 3.08, F(1, 298) = 6.00, p < .02) immediately and reported significantly more beverage orders one month later (M_{secret} = 1.45 vs. $M_{no\ secret}$ = 1.00, F(1, 257) = 4.97, p < .03).

Mediation Analyses

Time 1. Indirect effect on brand interaction intentions through brand relationship complication and brand attitude (excitement). Using Hayes PROCESS model 6 as in study 1, the serial indirect effect is significantly positive, because the 95% bootstrap confidence interval is above zero (.059 to .205 with attitude, .296 to .634 with excitement).

Time 2. Indirect effect on brand interaction through brand relationship complication, time 1 brand attitude (excitement), and time 2 brand attitude. We used the same PROCESS model and find a significantly positive serial indirect effect with a 95% bootstrap confidence interval entirely above zero (.007 to .059 with time 1 brand attitude, and .023 to .150 with excitement).

Moderation Analysis

Brand commitment

The interaction effect of attitude and brand commitment is significant ($\beta_{interaction}$ = .10, SE = .04, t(256) = 2.40, p < .02), and the conditional indirect effect of secret condition on brand interaction is positively significant at values of 5.00 and above for brand com-

mitment (75th and 90th percentiles; 95% bootstrap confidence interval .03 to .44 and .06 to .61, respectively). The index of moderated mediation is significantly positive, with a 95% bootstrap confidence interval between .02 and .18.

GENERAL DISCUSSION

Two studies found that exposure to a brand secret makes consumers more interested, excited and engaged with brands in which they are in a committed relationship. The contributions of these findings are twofold. First, we approach secrets as a form of exclusive communication rather than a synonym for silence and are therefore prompted to consider secrecy as a relational form. We thus empirically demonstrate that secrets, largely treated as damaging in their outcomes by researchers who primarily consider these phenomena from individual moral and psychological perspectives, can have a positive valence when considered in a relational context. Second, we contribute to research on brand relationships (e.g., Fournier 1998; MacInnis and Folkes 2017) by advancing a theory of secrets that can have a positive impact on the way consumers view a brand partner, finding that the marketplace seems to offer a safe space in which to explore alternative forms of relationship experience with which humans are otherwise uncomfortable but which have the benefit of increasing partners' ability to experience hedonic pleasure in a committed relationship beyond its early stages (Kelly and McKillop 1996; Fitzsimons, Finkel, and Vandellen 2015). A secret is thus shown to be a powerful tool in marketing managers' arsenal of tactics to bring back the butterflies in consumers' relationships with their brands—and so, perhaps, to offer a fledgling pathway for exploring longevity in other human relational forms.

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Understanding Personalized Lifestyle Marketing:
An Experimental Approach

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EXTENDED ABSTRACT

While personalization refers to individual offerings based on specific customer attributes, most research on personalization to date has focused specifically on consumers' product preferences, and accompanying this research is the rapid proliferation of recommendation systems in marketing practice (Wedel & Kannan, 2016). Despite the concreteness of such product recommendations, they are often not robust across purchase or consumption contexts (Lambrecht & Tucker, 2013). These recommendations also tend to exploit and rely on consumers' pre-existing preferences rather than helping to further develop and expand their preferences (Dellaert & Häubl, 2012).

In this research, we examine how companies can employ a new form of personalization—*personalized lifestyle marketing*—to help consumers *develop* their preferences instead of focusing on consumers' existing preferences. In contrast to personalized product marketing, personalized lifestyle marketing does not focus on existing preferences for products but instead focuses on the communication of lifestyles surrounding product use that are adapted according to individual underlying values (which become reflected in distinctive lifestyle activities). For instance, instead of featuring specific products and product attributes, French furniture retailer Leroy Merlin recommends general furniture styles associated with various lifestyle preferences. This personalized lifestyle-focused content is expected to inspire customers to explore new connections between the products as means to realize their value as ends (or higher-level goals).

The contribution of this paper to existing literature is twofold. First, while previous research has used social media data to infer consumers' personality traits (Matz, Kosinski, Nave, & Stillwell, 2017), we show how individual customers' values in life can be predicted from traditional transaction data from loyalty cards through machine learning. Second, we explore the effects of *personalized lifestyle marketing* on actual purchase behavior (i.e., purchase volume, timing of purchase, and diversity of purchase) using a large-scale field experiment with an international furniture retailer. We predict that, compared with personalized product-focused content, personalized lifestyle-focused content may stimulate product purchases and broaden the scope of choices that consumers make. Furthermore, we expect that these effects do not occur immediately after consumers are exposed to personalized lifestyle-focused content, but only after a deliberation phase.

Preliminary evidence for the potential positive effects of personalized lifestyle marketing can be found in the extant literature on consumer identity. For instance, when identity-relevant brand information is indirectly referenced (e.g., "*Charlie's*: A good choice for green consumers") in marketing content, this content can enhance consumers' *perceived agency* and self-determination, and increase consumers' intrinsic motivation to express their self-identities and values through buying and consuming products (Bhattacharjee, Berger, & Menon, 2014).

Referencing broader values that consumers deem important, may also *inspire* consumers to pursue consumption goals that are strategically advantageous to brands that adopt such personalized lifestyle content. Here, customer inspiration is defined as "a customer's temporary motivational state that facilitates the reception of a marketing-induced idea to the intrinsic pursuit of a consumption-related goal" (Böttger, Rudolph, Evanschitzky, & Pfrang, 2017, p. 117). In personalized lifestyle marketing, rather than prompting consumers to consider specific products by featuring product-focused content, lifestyle-focused content may serve as an external stimulus that injects a kernel of a new idea into consumers, thereafter evoking a learning process about new connections between the self and the external stimulus. Inspired by the personalized lifestyle content depicting particular values, consumers may cognitively and creatively transform these inputs into new insights about how they can pursue their aspired values using various products of the focal brand, resulting in a broader consideration of potential products that they may not have previously considered. Consequently, this learning process will require some time to enfold and will then lead to the selection of a greater variety of products as more potential lifestyle-fitting aspects of the products become evident.

In cooperation with an international furniture retailer, we conducted a 2 (content: lifestyle vs. product-focused) x 2 (personalization: yes vs. no) between-subjects design that was applied to a training sample and a scored sample.

First, we collected information about the lifestyle segments of 3,022 customers through an email-administered survey using a retailer-specific typology of nine different lifestyles (training sample). Second, we extracted the loyalty card data and the transaction history for the past two years of this training sample from the retailer's CRM database, and trained a naïve Bayesian machine learning algorithm to predict the associated lifestyle of 8,051 customers (scored sample, in-sample accuracy = 51%). Third, all customers were randomly assigned to receive (a) either a lifestyle or a product-focused newsletter that (b) either fit to their stated/inferred lifestyles (personalized) or was randomly chosen from all nine lifestyles (non-personalized).

During the ten weeks following the reception of our newsletter manipulation, customers exposed to personalized lifestyle-focused content bought more products (M = 7.39, SE = .43), compared with those customers who were exposed to a random lifestyle-focused newsletter (M = 6.28, SE = .37), a personalized product-focused newsletter (M = 6.51, SE = .37) or a random product-focused newsletter (M = 7.08, SE = .39). To account for customers who did not buy any products, we use a hurdle model (Mullahy, 1986) to analyze product purchases as the result of a two-stage process for each customer (Ailawadi & Neslin, 1998), in which customers first decide whether to buy (purchase incidence) and then choose how many products they buy (purchase quantity). In line with our predictions, our analysis revealed an interaction effect between content and personalization on purchase incidence (b = .087, z = 2.48, $p < .05$). A marginal effects analysis shows that personalized lifestyle-focused content increased product purchases more strongly than personalized product-focused content (t(3248) = 2.27, $p < .05$) and random lifestyle-focused content (t(3248) = 2.92, $p < .01$). Subsequent analyses reveal that consumers in the personalized lifestyle-focused condition make also more diversified purchases across categories and that the effect occurs in the last third of the observation-period (subperiod 3). These results show that personalized lifestyle marketing broadens consumers' consideration sets, suggesting that consumers might extend their product interest beyond their initial preference.

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Value Sensitivity in Judgments of Relative versus Absolute Preference

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EXTENDED ABSTRACT

"Consider two applicants to an MBA (master of business administration) program who are identical on all relevant dimensions except that Applicant A has a Graduate Management Admission Test (GMAT) score of 610 and Applicant B has a GMAT score of 590. Will Applicant A be evaluated more favorably than Applicant B?" Hsee et al. (1999, p. 578) propose that in joint evaluation, where the two applicants are presented side by side to the same decision-makers, "Applicant A will always be favored over Applicant B." When options are jointly presented, people will compare one option to the other and discern which option is better (see also Hsee and Zhang 2010). This fundamental assumption of the evaluability hypothesis is consistent with the dominance rule, which states that one should always prefer an alternative that scores higher than the other(s) on one attribute, while scoring at least as high on the remaining attributes (Montgomery 1983, p. 344). For instance, ceteris paribus, decision-makers are expected to prefer a Bluetooth speaker that has 12 hours of battery life (labeled "Speaker A") over a speaker that has 10 hours of battery life (labeled "Speaker B").

In this paper, I posit that decision-makers will not always prefer Applicant A over Applicant B—or Speaker A over Speaker B—when the two options are presented side by side. I propose that decision-makers' sensitivity to the value of the attribute (e.g., GMAT score, battery life) is contingent on the preference elicitation procedure. For the purposes of this research, I classify preference elicitation tasks into two categories: relative and absolute tasks. Relative tasks ask participants to evaluate alternatives in terms of relative preference (e.g., "do I like A more than B?"). In this paper, I focus on two relative tasks: choice and ranking. In contrast, absolute tasks ask participants to evaluate the options in terms of absolute preference (e.g., "how much do I like A?"). In this paper, I will focus on two absolute tasks: rating and willingness-to-pay (WTP).

I conjecture that differences in attribute values are more relevant for judgments of relative preference than for judgments of absolute preference. Consequently, I hypothesize that participants will be more sensitive to a difference in the attribute's value when they respond to a relative task compared to when they respond to an absolute task. My main prediction is that participants will express a stronger preference for the option that is superior on the attribute along which options differ (i.e., the "dominating option") in relative (e.g., choice and ranking) compared to absolute tasks (e.g., independent ratings and WTP).

I tested my hypothesis in 10 studies. Using different experimental designs, stimuli, and samples, Studies 1a-1c, 2, and 3 show that participants are more likely to prefer a dominating option when they respond to a relative (i.e., choice) compared to an absolute (i.e., rating) task. In Study 4, I replicate previous findings when ranking is employed as a relative task besides choice, and when WTP is employed as an absolute task besides rating. Further, I extend my findings to the case where an option is not strictly dominating, but is favored by the relative difference in attribute scores instead (as in "decisive advantage;" see Tversky et al. 1988). In Study 5, I show that my effects reverse when the choice task is modified to be an absolute task—such as when participants make independent choices for the two options—and the rating task is modified to be a relative task—where participants provide their rating on a bipolar scale that indicates strength of preference for one option relative to the other. These results are consistent with the notion that the type of task influences the extent to which participants are sensitive to differences in attribute values. In Studies 6 and 7, I discuss two moderators of my basic result. I propose and show that my effect is attenuated when the importance of the attribute along which options differ is relatively high (Study 6), and when the difference in attribute values is relatively large (Study 7). Finally, in Study 8, I discuss an intervention that behavioral researchers can use to mitigate the effect presented in this paper. I demonstrate that a rating task that features a wide scale (i.e., a scale with a high number of points) can detect relatively low levels of value sensitivity, thus attenuating my basic result.

Overall, the present research makes five important contributions. First, it highlights the need to consider the preference elicitation task as a key driver of value sensitivity. Second, the present research contributes to theory on scope insensitivity by being the first to demonstrate scope insensitivity in joint evaluation of options as a function of differences in the elicitation procedure. Third, this research extends work on the prominence hypothesis, which states that the more important attribute has a greater influence in choice than in matching judgments (Tversky et al. 1988). My findings extend the prominence hypothesis by showing how the preference elicitation task influences preference in situations characterized by dominance and by decisive advantage, instead of prominence. Fourth, the present work contributes to earlier research in consumer behavior and psychology showing that the preference elicitation task can influence preference construction (e.g., Nowlis and Simonson 1997; O'Donnell and Evers 2019) by demonstrating a wide range of previously undocumented effects in comparisons between some of the most commonly used preference elicitation tasks that are not predicted by prior research. Finally, the dominance rule—which states that decision-makers should always prefer options that are strictly dominating—is one of the most fundamental principles of rational theory. In fact, even descriptive models of decision-making frequently assume that decision-makers should prefer a strictly dominating option when available (e.g., Tversky 1972; Tversky and Simonson 1993). My research suggests that preferences are less consistent with the dominance rule and by extension with value-maximization, when elicited through an absolute compared to a relative task. Thus, the assumptions of decision-making models are more likely to be satisfied when researchers employ relative tasks in order to measure preference.

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When Time is Like Money: Thinking of Monetary Value of Time Decreases Willingness to Spend Time on Others, but Increases Time Spent on Self

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EXTENDED ABSTRACT

According to the Bureau of Labor and Statistics, the average adult spends over five hours a day on relaxation and leisure (United States, 2017), 49% of all time not spent either working or sleeping. Yet, nearly half (44%) of Americans feel they lack enough time to do the things they want to do (Jones and Saad, 2017). Most research on allocation of time for leisure has focused on the tradeoff between spending time on work or leisure (Jacoby et al., 1976; Bellezza et al., 2017). However, less research has explored what factors influence whether consumers choose to spend their free time outside of work on leisure or other pursuits, which in terms of the volume of time spent is one of the most important time consumption decisions consumers make.

One such factor that may influence time allocation for leisure is the perception of time as money. Monetizing one's time, like computing one's hourly wage or being paid hourly, has been found to decrease consumers' willingness to spend their time volunteering (DeVoe and Pfeffer, 2007; 2009; 2011). This is believed to be the result of prioritization of money in decision making (DeVoe and Pfeffer, 2007) such that any chunk of time not used to earn money is devalued (DeVoe and House, 2012). While it has been speculated that this would have a similar effect on all forms of unpaid time, including leisure (Pfeffer and DeVoe, 2012), the aforementioned studies have not specifically investigated leisure.

We seek to challenge this assumption and propose that putting a price on time will lead to a greater willingness to spend time on leisure. Just like money priming increases self-emphasis (Vohs et al., 2006; 2008), we propose that monetary evaluation of time will lead to a generalized self-focus in time allocation decisions. As a result, we predict that consumers who see their time as money would show a preference for spending their free time on leisure along with a reluctance to volunteer. Supporting this, we present five studies that show monetary evaluation of time decreases willingness to spend time volunteering but increases time spent on leisure.

In Study 1 we analyzed data from the American Time Use Survey, where respondents reconstruct their previous day reporting each activity. We find that hourly (vs. non-hourly) paid employees report less time spent on volunteering ($M_{salaried}$=11.19 minutes; M_{hourly}=7.16 minutes) and more time spent on leisure ($M_{salaried}$=3.85 hours; M_{hourly}=4.35 hours), controlling for all relevant factors like income and hours worked. This effect is consistent in the last individual year (2017 N=5,471) and the cumulative 15 years (N=105,679).

In Study 2A we sought to replicate the effect found in Study 1 and directly pit the activities against each other. 261 MTurkers (M_{age}=36.4 (SD=11.5); 49.1% female) were asked to make a tradeoff between (1) spending time on leisure or volunteering and (2) spending time on paid work or volunteering. We also measured participants' prioritization of money and their level of self-focus (vs. others) in time consumption decisions. Finally, we asked participants how much experience they had being paid hourly. We found that participants who had more experience being paid hourly were more willing to spend time on leisure over volunteering (r=.32, p<.001). Importantly, experience being paid hourly had a stronger effect on participants' preference for leisure over volunteering, compared to their preference of work over volunteering (r=.22, p<.001). This sug-

gests the effect of monetary evaluation of time on volunteering is influenced not only by the opportunity cost of time to earn money, but also by engaging in leisure. Finally, we found that while self-focus mediated the tradeoffs of leisure-volunteering (indirect effect=2.47, p<.001), no such effect was observed for willingness to work more for greater pay (indirect effect=2.47, p<.001).

In Study 2B we tested if we could get the same effect by manipulating participants to see their time as money. 274 students (M_{age}=20.03 (SD=1.23), 53.4% female) reported how much they expected to make after graduation and half were randomly assigned to calculate their expected hourly wage. We found calculating hourly wage led to a greater willingness to spend their time on leisure over volunteering ($M_{hourly-wage}$=70.85; $M_{control}$=64.90, p=0.05).

Study 3 tested if manipulating monetary evaluation of time would increase consumers' intentions to spendt time on a specific leisure activity (opposite direction of their willingness to volunteer). 141 students (M_{age}=20.9 (SD=1.4); 47.5% female) were randomly assigned to calculate their hourly wage for a hypothetical job. We found those who monetized their time reported both a greater likelihood that they would spend three hours at an upscale restaurant for dinner ($M_{hourly-wage}$=4.79, $M_{control}$=4.39) and a lower willingness to spend their time volunteering ($M_{hourly-wage}$=5.27, $M_{control}$=5.58).

Finally, Study 4 examined the influence of seeing time as money on both self and other focused leisure activities. Participants (352 students; M_{age}=20.3 (SD=1.4); 48.6% female) were assigned to report their intention to engage in a self-focused leisure activity (see a movie they would enjoy) or other focused leisure activity (see a movie their friend would enjoy). We found that those manipulated to put a price on time were more likely to go to a movie they would enjoy ($M_{hourly-wage}$=5.94, $M_{control}$=5.62), but less likely to attend a movie their friend would enjoy ($M_{hourly-wage}$=3.47, $M_{control}$=3.80).

Across five studies, we found that putting a price on time caused consumers to be more willing to engage in leisure activities in lieu of volunteering. Further, self-focus mediated the relationship between monetary evaluation of time and the desire to spend time on leisure over volunteering, and the desire to engage in a leisure activity was only present when it was self-focused. This shows that monetarization of time not only has an impact on the desire to use time to make money, but also influences time consumption decisions when there is no opportunity to use time for money. This has important implications for understanding how consumers choose to allocate their time outside of work and identifying a manipulation that can increase the time-strapped consumers' willingness to engage in leisure activities.

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Conceptualizing and Measuring Integral Nostalgia

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EXTENDED ABSTRACT

Nostalgia pervades the marketplace and pop culture. Consumers relive the past through renaissance festivals, Civil War re-enactments, Prohibition-era speakeasies, classic cars, vinyl record collections, and 1980s-style video arcades. Researchers usually define nostalgia as a sentimental longing for the past (Stern 1992). Consumers can experience nostalgia for both their personal past (Wildschut et al. 2006) as well as a vicarious or historical past (Stern 1992). Some researchers have conceptualized nostalgia as a trait (Holbrook 1993), or a relatively stable disposition to experience a sentimental longing for the past. Others have operationalized nostalgia as an incidental emotion (Lasaleta, Sedikides, and Vohs 2014; Wildschut et al. 2006), which refers to feelings that influence judgments and behaviors that are unrelated to the stimulus or event that triggered the emotion (Lerner, Han, and Keltner 2007)creative ways. We are extremely grateful for the ideas they raised. Inasmuch as emotions influence the consequential judgments and decisions in life, it is crucial to further refine models for predicting how the mind decides.","DOI":"10.1016/S1057-7408(07. Understanding the effects of trait-level or incidental nostalgia is important, but it is also helpful for marketers to know whether (and which) consumers are likely to respond favorably to a nostalgic advertisement or product. This requires operationalizing nostalgia as an integral emotion that consumers feel in response to a time period or anything that reminds consumers of the time period (people, pictures, songs, etc.). For example, one consumer may feel strongly nostalgic for his childhood but not for the 1980's, while another consumer might feel nostalgic for the 1950's but not for her college years. Although researchers have given considerable attention to nostalgia over the past two decades, there is currently no method for measuring integral nostalgia. Thus, in this paper we develop and validate an integral nostalgia scale.

Building on the definition of nostalgia, a close reading of the literature, and our own qualitative research (open-ended online surveys and netnography; Kozinets 2002), we identify three essential dimensions of integral nostalgia: warmth, loss, and simplicity. We define warmth as positive feelings toward the time period; loss as a feeling of grief experienced when someone perceives a cherished person, object, place, or lifestyle to be gone, never to return; and simplicity as the quality of being more natural, easier to understand, and easier to function within the time period.

To build a scale out of these three dimensions, we first developed an initial list of 35 scale items, which we narrowed down to 28 with the help of experts. We refined the initial pool of 28 items in study 1a by asking participants to fill out these scale items for two time periods: the 1980's and childhood. We conducted exploratory factor analyses for both time periods with Varimax rotations and three factors. We eliminated any item that did not load on to its primary factor at .60 or greater or that cross-loaded on to another factor at .40 or greater, for either time period. This resulted in 12 items that loaded evenly across the three dimensions. We then conducted study 1b with a separate population to confirm the three-factor structure of our scale using a confirmatory factor analysis. After eliminating one more item, we found good fit of the model for all three time periods as well as satisfactory lower and higher-order factor structures (all standardized coefficients >.70).

Once we had a scale, we needed to determine if the scale actually measures nostalgia. To do so, study 2a tested whether our scale would reflect high and low levels of integral nostalgia for both personal memories and historical eras. We asked participants to choose their most or least nostalgic time from either a list of personal (e.g., High School) or historical (e.g., the 1960's) time periods in a 2 (level of incidental nostalgia: high vs. low) x 2 (type of time period: historical vs. personal) between-subjects design. Our scale was consistently higher on warmth, loss, simplicity, and the combined integral nostalgia scale in the high versus low integral nostalgia condition (total scale: M_{High_Nost}=5.10, M_{Low_Nost}=3.48; $F(1,476)$=221.51, $p<.001$).

Study 2b tested whether high levels of incidental personal nostalgia would influence our scale for the personal past, 1990's, and 1950's. Participants wrote about either a personally nostalgic (nostalgia condition) or ordinary (control) event, then rated the 1950's, 1990's, or their personal past on the integral nostalgia scale. The incidental nostalgia manipulation increased participants' integral nostalgia ratings for their personal past ($M_{Nost\_Condition}$=5.00, $M_{Control\_Condition}$=4.12), but not for the 1990's ($M_{Nost\_Condition}$=4.72, $M_{Control\_Condition}$=4.86) or the 1950's ($M_{Nost\_Condition}$=3.75, $M_{Control\_Condition}$=3.79; interaction: $F(2,235)$=3.25, $p=.04$). These results confirm that our scale detects differences from a common manipulation of incidental nostalgia, but also suggests that this manipulation is more likely to increase feelings of personal nostalgia than historical nostalgia.

Study 3 tested if our integral nostalgia scale has more predictive power than existing scales. We measured integral nostalgia for two time periods—the 1960's and 1990's—and general nostalgia using two existing scales by Batcho (1995) and Holbrook (1993). We then had participants choose and watch the trailer for one TV show and one movie, each from a list of four. Each list included two options that were set today, one option set in the 1990's (*Singles* and *The Nineties*), and one option set in the 1960's (*Taking Woodstock* and *The Sixties*). Only the 1960's integral nostalgia scale predicted the 1960's nostalgic choice (Wald's $\chi^2(1, N=191) = 15.49$, $p<.001$; 1990's, Batcho, and Nostalgia Proneness scales $p>.05$). We obtained similar results using 1990's nostalgic choice as a DV and testing 1990's integral nostalgia with the other scales (Wald's $\chi^2(1, N=191) = 6.12$, $p=.013$; 1960's, Batcho, and Nostalgia Proneness scales $p>.15$). These results together suggest that our integral nostalgia scale is better able to predict nostalgic product choices than existing nostalgia scales.

Nostalgia is common in the marketplace, yet marketers have only recently started to study its functions, consequences, and origins. We build on existing conceptual and empirical work to develop an integral nostalgia scale that can more accurately reflect nostalgia's role in consumer behavior, we hope to encourage more research into this complex emotion by marketing researchers.

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Drug Repurposing, Illness Severity, and Consumers' Expectations of Side Effects

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EXTENDED ABSTRACT

There is a growing interest in repurposing of drugs—the use of identical chemical compounds originally approved for one medical condition to be used for a different purpose (Tobinick 2009). For instance, Thalidomide, a morning-sickness drug, is now used to treat leprosy and blood cancer. A medicine previously used to treat acne is now part of an effective treatment for a form of leukaemia. The Anticancer Fund reports evidence in almost 260 non-cancer drugs of anti-cancer activity (The Economist, 2019). Drug regulation agencies are supportive of this approach (Chong and Sullivan 2007). Repurposed drugs that have been previously approved as safe can save years in development time and reduce costs.

One assumption that underlies repurposing is that once a drug's safety is established in the first approved medical indication, no serious unexpected safety issues should arise when the same drug is used for another indication. The medical fact that underpins this assumption is that the side effects of a drug are determined by factors such as dosage, the patient's age and metabolism, and potential interaction with other drugs—not by the type of illness the drug is used to treat or prevent.

We hypothesize that, counter to the medical rationale, consumers' expectations of side effects vary with the severity of the illness for which the drug is used. In particular, we predict that consumers expect more intense side effects for a drug that can be used to treat or prevent a more severe illness. Consumers' belief that there is "no gain without pain" can affect perceptions of product efficacy, e.g. a bad tasting cough syrup is perceived as more efficacious than a good tasting syrup (Kramer et al. 2012). In a similar vein, people often presume that big effects or consequences are brought about by big causes (Gilovich and Savitsky 2002). Research further shows people expect events of large magnitude to be caused by major causes even when the event is uninformative about the cause (LeBoeuf and Norton 2012). In sum, we suggest that because large problems are typically seen to require large solutions or interventions, a severe illness will be seen to 'require' more intense side effects than a milder one.

In study 1 we examined consumers' expectations of side effects for an existing drug which is prescribed for multiple indications that vary significantly in severity. Participants (N=123) received information about the mechanism of action of the antibiotic Levaquin and learned that it was either indicated for the treatment of plague (severe) or acute bacterial sinusitis (mild). All participants then read the same Levaquin patient information leaflet and rated the expected intensity of six side effects (e.g. headache, nausea, rash) on a scale from 1 (= very mild) to 5 (= very severe). Participants in the plague condition rated the side effects as significantly more intense than in the sinusitis condition ($F(1,122) = 4.63$, $p = .03$, $Mdiff = 0.29$, 95% CI [0.02, 0.55]).

In the second study we added two more conditions to our design and informed participants that the same drug could treat both a mild and a severe illness. Participants (N = 656) were told that the calcium channel blocker Nufloxine had been recently approved for the treatment of heart disease and/or leg cramps. In the single-purpose conditions participants were then asked to imagine that they were taking Nufloxine to treat either heart disease or leg cramps and rated the expected intensity of eight potential side effects. In the multi-purpose conditions participants were asked only about one of the illnesses. To control for drug interaction effects, participants were asked to imagine that they were not taking any other drugs. In the single-purpose conditions, side effect intensity was greater for heart disease than for leg cramps ($M_{diff} = 0.45$, 95% CI[0.04, 0.86], $p = .03$). We observed the same pattern in the multiple-purpose conditions ($M_{diff} = 0.40$, 95% CI[-.01, 0.81], $p = .06$).

In the next study we tested the effect persisted when the drug was used for prevention rather than the treatment of an illness. Participants (N=291) learned that the novel Beta blocker Bixalol had been approved for the prevention of both stroke and/or recurrent headaches, and imagined taking Bixalol for the prevention of stroke or headaches. Side effect intensity did not differ significantly in the two single-purpose conditions ($M_{diff} = 0.14$, 95% CI[-0.586, 0.288], $p = .50$). Expected side effect intensity was higher for participants who learned about both indications and asked to imagine that they were taking Bixalol for the prevention of strokes ($M_{diff} = 0.44$, 95% CI[0.003, 0.868], $p = .04$).

Knowledge that a drug can be used to treat or prevent a severe illness thus results in expectations of more intense side effects. How may these expectations affect actual experience? One possibility is that of confirmation. For example cancer patients' pre-treatment expectations of side effects have been shown to predict the severity of experienced chemotherapy side effects (Roscoe, Hickok, and Morrow 2000). Another possibility is that participants expectations are disconfirmed (Oliver 1977). In a preliminary study, participants (N=116) assessed an allegedly newly developed mouth wash, which was either described as a product to treat and prevent severe gum disease or mild gum disease. After gargling with the mouthwash, participants rated the extent to which they had experienced four side effects (burning sensation, numbness, dry mouth, and tingling). In contrast to the previous three studies, participants in the severe illness condition reported to have experienced the side effects to a lesser extent than participants in the mild condition ($t(114) = 2.07$, $p < .05$).

The conclusion from our studies is that illness severity influences expected intensity of side effects when medically such inference is not valid. We provided some evidence that these expectations can affect experience. The setting we studied suggests disconfirmation, but more research is needed to test whether this is a general finding. Because more severe expectations of side effects may negatively affect treatment uptake and adherence to medically necessary drugs (Sabaté 2003) our findings have consequences for healthcare policy.

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The Benefits of Corporate Social Responsibility (CSR) for Consumer Choice and Behavior

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EXTENDED ABSTRACT

There is a general agreement regarding the positive firm- level impacts of CSR (Luo & Bhattacharya, 2009; Olsen et al., 2014; Torelli et al., 2012). On the other hand, there exists no consensus in terms of product-level impacts of CSR. Despite the vast amount of consumers' exposure to prosocial activities of firms in terms of advertisement and public relations, it is yet not clear how and why salience of firms' prosocial activity may change consumers' responses to products (Luchs et al., 2010; Chernev & Blair, 2015; Lin & Chang, 2012; Peloza et al., 2015). The results of previous studies are mixed. Some suggest no effect (Brown & Dacin, 2007), while others suggest either positive (Chernev & Blair, 2015) or negative effect of CSR on product evaluation and preference (Luchs et al., 2010; Lin & Chang, 2012).

We contribute to current literature by highlighting an important and yet unexplored factor in the effect of prosocial activities of firm on product evaluation. We look at the role of long-term benefits vs. costs of products. Our findings show that salience of prosocial activities of firms, for example reading a paragraph about CSR activities, significantly changes the evaluation of products with long-term benefits vs. costs, even if those products are not related to the focal firm that practices CSR. Participants in our studies showed higher preference for choices with long-term benefits vs. costs, e.g. healthy vs. unhealthy food, later larger vs. sooner smaller monetary rewards and saving vs. spending options, after salience of prosocial activities of firm.

We highlight the psychological impact of salience of firm's prosocial activities and suggest that consumers associate prosocial activities of firm with future vs. present time. We document consideration of future consequences (Strathman, 1994) as the mechanism for the impact of salience of firm's prosocial behavior on product evaluation. Previous studies mainly highlighted the impact of prosocial activities of firm on product evaluation as a halo effect and as a function of changes in firm's evaluation (Chernev & Blair, 2012; Luchs, 2010; Peloza et al., 2015). We contribute to this line of literature by highlighting the impact of prosocial activities of firm on individuals` cognitive processing. Our findings show that participants' consideration of future consequences improves after salience of prosocial activities of firms. Higher consideration of future consequences increases the preference for options with long-term benefits and lowers the preference for options with long-term costs. The impact of changes in consideration of future consequences as a cognitive process is not limited to the products of the focal firm and is extended to the products of other firms and general decision making.

In a pretest and using implicit association test (IAT), we explored the association between firm's prosocial activities and future vs. present time. The results of our pretest suggested an implicit association between firm's prosocial versus self-interested activities and future versus present time ($M_{congruent}$= 1128.92, $M_{incongruent}$=1312.35, $F(1,45)$=21.79, p<.01).

Stuy1 tests the main effect of salience of firm's prosocial activities on preference for long-term benefits. After finding words related to CSR activities vs. random words in a puzzle, participants showed higher preference for later larger vs. sooner smaller monetary rewards ($M_{Control}$ = 2.52, M_{CSR}=3.55, χ^2= 6.16, p =.01). Accordingly, participants in the CSR condition showed lower discount rate ($M_{Control}$= 0.12, SD= .03, M_{CSR}=0.10, SD= .04, $F(1,94)$ = 6.43, p =.01).

Second study provides further evidence on the main effect using an alternative manipulation and by measuring the preference for saving vs. spending. After reading a paragraph about CSR (vs. non-CSR activities) of a firm, participants showed higher preference for saving (M_{No-CSR} = 135.27, M_{CSR} = 148.87, $F(1,228)$ =3.65, p=.05). This effect occurred in spite of changes in positive emotion and construal level.

Study3 provided supporting evidence on the mediation role of consideration of future consequences. The participants who read a paragraph on CSR activities of firm showed higher preference for healthy food (M_{No-CSR} = 6.48, M_{CSR} = 7.31, $F(1,198)$ = 9.63, p <.00) and lower preference for unhealthy food compared to participants in the control condition (M_{No-CSR} = 7.97, M_{CSR} = 7.40, $F(1,198)$ = 3.99, p =.04). The food products were not related to the focal firm that was described as performing prosocial activities. Participants in CSR condition showed higher consideration for future consequences compared to those in the control condition (M_{No-CSR} = -.66, M_{CSR} = 2.51, $F(1,198)$ = 4.00, p =.04). This difference mediated the main effect of prosocial activities on preference for food ($LLCI$= -.27 to $ULCI$= -.001, p<.1).

Last study ruled out moral/virtue/normative priming as an alternative explanation for our findings. This study showed that although prosocial activities were evaluated as less virtue compared to other moral behaviors , however salience of prosocial activities better improved the preference for long-term benefits, i.e. healthy food, ($M_{Control}$ = 6.68 , $M_{Prosocial}$= 7.40, $M_{Other\ moral}$ = 6.95, ; $F(2,296)$=3.38 , p=.03) and lowered the preference for long-term costs, i.e. unhealthy food ($M_{Control}$ = 7.79 , $M_{Prosocial}$= 7.22, $M_{Other\ moral}$= 7.82; $F(2,297)$=2.56 , p=.07) . This effect was mediated by higher consideration of future consequences ($M_{Control}$ = -.66, $M_{Prosocial}$= 5.60, $M_{Self-focused\ moral}$ = 0.71, $F(2,297)$ =10.19, p<.01; $LLCI$= .09 to $ULCI$= .65, p<.05; $LLCI$= .07 to $ULCI$= .50, p<.05).

This paper contributes to previous literature on CSR by highlighting the important role of long-term benefits vs. costs of products, something that has been commonly ignored in the previous literature. Our findings suggest consideration of future consequences as the mediation mechanism for the impact of firm's prosocial activity on preference for long-term benefits. The results of our experimental studies suggest that reading about prosocial activities of a firm impacts preference towards other firms' products and decisions with no prosocial characteristics. This general effect suggests a broad impact of prosocial activities of firms that is extended to everyday decision making of consumers like retail purchasing, food choices or financial decision making.

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Being and Staying the Only One:
Creating Value Through Uniqueness in Mass Customization

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EXTENDED ABSTRACT

In recent years, many companies have started integrating the consumer into the new product development process by establishing mass customization (MC) systems (Kaiser, Schreier, and Janiszewski 2017). These systems enable consumers to create their own product design (Dellaert and Stremersch 2005). A considerable amount of research has been devoted to the factors that determine the resulting value for the consumer (Moreau 2011). An important source of the value that consumers obtain from designing or configuring their own products via MC systems is the perceived uniqueness of these products (Michel et al. 2009). One way for providers of MC systems to enhance the value of a customized product might be to provide the consumer who designed it with feedback about its uniqueness. This research examines the effects of two types of such feedback on a consumer's valuation of a customized product—that the particular design or configuration (1) is currently unique in that it has never been created before by another consumer and (2) will remain unique in that it will be unavailable to future consumers by blocking the configuration.

Taken together, feedback on current uniqueness ("Your configuration has never been created before") and future uniqueness ("Your configuration will be blocked for future consumers") should enhance the value-generating mechanism of perceived uniqueness.

> *Hypothesis 1:* *Feedback on (a) current product uniqueness increases consumers' subjective valuation to their customized products, (b) which should be further increased by feedback on future product uniqueness.*

So why should current and future uniqueness feedback generate value for consumers? We argue that perceived exclusivity plays a key role in this value-generating effect. Exclusivity has been referred to as one specific dimension of uniqueness (Barone and Roy 2010a). Consumers with a high need for uniqueness are likely to value uniqueness in products and therefore also have a preference for exclusive products (Barone and Roy 2010b). By giving consumers feedback that their product has never been configured before we not only notify them that their configuration is currently unique but also that it is currently exclusive. At the same time, by giving consumers feedback that their product will be blocked for future consumers we not only notify them that their configuration will remain unique in the future but also that it will remain exclusive. Thus, feedback on the current and future uniqueness of a configured product should trigger feelings of exclusivity, which in turn should create value for consumers.

> *Hypothesis 2* *The value-generating effect of current and future uniqueness feedback is caused by perceived exclusivity.*

Objectively, many customized products are actually unique given the vast number of attributes and options that consumers can choose from in typical MC systems. For this reason, the content of these feedback messages should not necessarily create value for consumers. Drawing on research on probability neglect (Sunstein 2002) and numeracy (Peters et al. 2006) we show that people tend to neglect differences in probabilities and often lack the ability to comprehend and transform numerical information. We theorize that, in such a mass customization setting, consumers tend to neglect the fact that the product they have configured is actually very likely to be unique, and to underestimate the probability of it being unique. Therefore, providing consumers with detailed information about the number of possible attribute combinations in MC systems should reduce the beneficial effects of uniqueness feedback by highlighting the fact that many product configurations are unique anyway. Thus, we hypothesize that revealing the size of the actual solution space to consumers attenuates the positive effect of uniqueness feedback on their subjective valuation of the customized product.

> *Hypothesis 3* *The value-generating effects of current and future uniqueness are attenuated when the size of the solution space is made transparent to consumers.*

Four experiments reveal that current and future uniqueness feedback create value for consumers, that the effect is mediated by perceived exclusivity and moderated by making the solution space transparent.

The first study tests the real-life impact of current uniqueness feedback. Specifically, it examines whether such feedback has a positive effect on the subjective value that consumers attribute to the product (operationalized as conversion rate). We conducted a field experiment in collaboration with the provider of an MC system in the domain of customized cereals (mymuesli.com). Our results show that the difference in the conversion rates between the current uniqueness and no feedback condition is significant, supporting hypothesis 1a.

In our second study we tested whether both forms of uniqueness feedback—current and future—can drive the subjective value consumers attribute to their customized products (measured as actual willingness to pay (WTP)). We conducted a lab experiment using an MC system to customize sneakers. Our findings reveal that both current and future uniqueness feedback significantly increase actual WTP compared to when they are given no feedback (see figure 1). This provides evidence for hypothesis 1b.

The third study tests whether the additional value consumers attribute to their configured product (measured in WTP) is caused by perceived exclusivity. We conducted an online experiment using an MC system to customize sunglasses. A mediation analysis shows that the effect of uniqueness feedback on WTP is mediated by perceived exclusivity. Beyond the successful test of hypothesis 2 this study provides renewed support for hypothesis 1.

In our fourth study we aimed at testing whether making the solution space transparent to participants attenuates the effect of current and future uniqueness feedback on perceived exclusivity. We

conducted an experiment with an online panel using an MC system to customize sneakers. Our findings reveal that making the solution space transparent to participants moderates the effect between uniqueness feedback and perceived exclusivity. Beyond the successful test of hypothesis 3 this study provides renewed support for hypothesis 1.

With this research we contribute to the literature on the interaction of consumers with MC systems by showing how the functionality of these systems can be considerably enhanced by an automated feedback function. We also contribute to the uniqueness literature by demonstrating that two types of product uniqueness feedback (current and future) create value for consumers in an MC context.

Keywords: Mass Customization, Product Uniqueness, Feedback Mechanism, Exclusivity, Innovation, Biases

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Vicarious Gamification:
How Chance Selection of Products for Promotion Increases Preference

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EXTENDED ABSTRACT

Merce Cunningham was a famous dance choreographer who found that he could create value for his audience and improve the image of his company by deliberately infusing chance into the creation of his performances. Cunningham used various techniques to sprinkle chance into his creations such as rolling dice before a performance to determine accompanying music (Homans 2009). This employment of "Deliberate Chance" is highly irregular in a typical product consumption experience. Indeed, companies frequently engage in market research, investing large portions of profits towards careful selection of products for promotion hoping to leave only the smallest decisions to chance. While Cunningham employed chance in the development of his performances, in the current research we explore whether this injection of chance can benefit already existing products. Specifically, by creating and resolving uncertainty through the deployment of chance in their own selection of a product for promotion, companies allow consumers to experience a form of "vicarious gamification" that has upsides for both consumers and companies. We propose that because deliberately employing chance in the selection of a product for promotion on a company's part is perceived as more fun by consumers than intentional selection, consumers will exhibit a heightened preference for products chosen for promotion by deliberate chance.

Prior work showcases an aversion to chance, frequently signaled through engaging in superstitious beliefs or acts to master purely chance outcomes (Griffiths and Bingham 2005; Reczek, Haws, and Summers 2014; Wohl and Enzle 2002). However, while literature on chance has largely catalogued an aversion to chance outcomes, use of chance in outcome determination is actually considered beneficial and preferred in certain contexts in which chance can alleviate guilt (Lin and Reich 2018), absolve responsibility (Leonhardt, Keller, and Pechmann 2011), or subvert bias (Bolton, Brandts, and Ockenfels 2005; Keren and Teigen 2010). Therefore, chance in decision making does not uniformly elicit negative reactions and despite the well-documented aversion to chance outcomes, we propose that selecting a hedonic product for promotion by chance increases consumer preference for that product.

How does the infusion of deliberate chance into selection of products for promotion influence consumer preferences? Research on gamification, the act of adding uncertainty to an otherwise non-game activity, has indicated that such an addition can increase the fun consumers experience as they "play the game" and subsequently drive consumer preference (Shen, Hsee, and Talloen 2018). Unlike previous research that creates uncertainty for consumers, the present research does not examine the direct influence of uncertainty experienced by consumers on consumer preference. Instead, the current studies examine gamification in a previously unexplored way by creating uncertainty for a company, then investigating the effect of consumer awareness of the resolution of this company's uncertainty on consumer preference for products promoted by that company. In this way, uncertainty is experienced only by the company engaging in the process of deliberate chance. Therefore, through a "vicarious gamification" effect, chance selection of products for promotion on the part of a company leads to greater preference because consumers perceive this selection process as more fun.

In five studies we demonstrate this preference in consumer intentions, behavior, and consequential product choice, using a variety of promotion types and products. Our first study demonstrates the "vicarious gamification" effect, showing heightened intentions to purchase a specific flavor of ice cream selected for promotion by chance. Our second study builds on this effect, demonstrating that more participants click on an Amazon link for a promoted chocolate when they learned that the flavor was selected by chance than by intention. Our third study took the behavioral consequences of this effect further in an incentive compatible design, illustrating that more participants opted to participate in a lottery to win a specific flavor of Pringles when they learned that it was selected by chance than by intention. Our fourth study provides mediation evidence that this preference arises because selection of a product for promotion by chance is more fun than selection by intention. A post-test confirms that the company, not the product, appears more fun. Our fifth study examines an important boundary condition of the effect and demonstrates that preference for products selected by deliberate chance depends on product type. Only when the product is hedonic and is congruent with the fun image bestowed upon the company by engaging in chance selection do participants show a preference for the product selected by chance. When the product is utilitarian and therefore is incongruent with the company's fun image, this effect reverses such that selection by intention is significantly preferred.

The current research is the first to reveal a "vicarious gamification" effect, indicating that mere awareness of a company's experience and resolution of uncertainty in its selection of a product for promotion by deliberate chance causes consumers to prefer hedonic products. This research also reveals that this preference emerges because of chance's ability to increase feelings of fun for the consumer regarding a company's product promotion selection process. This illuminates a novel mechanism through which information about a company's experience and resolution of uncertainty in the process of a product's selection for promotion can actually positively influence consumer preferences, and also contributes to a growing body of work that highlights the beneficial effects of chance processes (Bolton et al. 2005; Keren and Teigen 2010; Leonhardt et al. 2011; Lin and Reich 2018). By focusing on the influence of chance in selection procedures, we reveal a novel process by which intentionality on the part of a company can play a role in consumer preference for a promoted product.

These results offer companies a clear marketing strategy with which to draw consumers in through the employment of deliberate chance, piquing interest and enticing them towards a consumption experience while also improving the companies' image.

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Chronic Loneliness and Consumer Responses to Interpersonal Haptic Experiences

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EXTENDED ABSTRACT

People now live in an era of seemingly constant connectedness, with the average person spending 135 minutes a day on social media (GlobalWebIndex 2017). However, despite these connections, an increasing number of people feel lonely, to the point that loneliness is considered a global epidemic (Irving 2018; Klinenberg 2018).

Feeling lonely is self-threatening. It is well known that consumers frequently attempt to compensate for threats to interpersonal connections in many different ways (Zhou et al. 2008). Recognizing this tendency, marketers introduce services that specifically focus on haptic experiences, claiming that these help lonely consumers regain feeling connected with others. For example, cuddlist.com is a website where consumers can book a therapeutic cuddle session with a professional cuddler. Although these haptic experiences may provide lonely consumers with some positive feelings of connection with others, little is known about whether chronically lonely consumers would actually favor such haptic experiences or avoid them.

The question we address is whether chronically lonely people value interpersonal haptic experiences. It is reasonable to think that they would do because such experiences may provide a means of social reconnection that may mitigate their loneliness. However, we predict that lonely consumers are less likely to do so because loneliness is often characterized by low levels of trust (Cacioppo and Hawkley 2009), which result in low levels of touch (Layden, Cacioppo, and Cacioppo 2018). Integrating conceptual perspectives from loneliness, interpersonal touch, and trust, we propose that people who are chronically lonely feel uncomfortable with interpersonal touch, and this discomfort spills over into their interactions with salespeople and other consumers in retail settings. Specifically, we predict that chronic loneliness is negatively associated with preferences for interpersonal interactions in stores (e.g., interactions with salespeople) and services that involve interpersonal touch (e.g., a massage), but is unrelated to preferences for services that do not involve interpersonal touch (e.g., a video game). To explain the underlying mechanisms, we predict that lonely consumers' lower preferences for such haptic experiences are sequentially mediated by their lower levels of interpersonal trust and lower levels of comfort with touch. We further predict that this sequential mediation is moderated by whether lonely consumers adopt active coping strategies, such that the sequential mediation effects are reduced or eliminated for those who adopt active coping strategies.

We test our predictions in four studies. In Study 1, we provide an initial test of whether chronically lonely consumers value their preferences for interpersonal haptic experiences. Participants read a list of job tasks of either a massage therapist or a freelance writer. Participants then completed their preferences for the job and a measure of chronic loneliness (Russell, Peplau, and Cutrona 1980). As expected, participants high in loneliness decreased their preferences for the massage therapist than those low in loneliness. However, there was no significant difference in preferences for the freelance writer.

In Study 2, we aim to show the underlying mechanisms. We predict that the effect of loneliness is first mediated by low levels of interpersonal trust, whose effect is then mediated by low levels of comfort with touch. We also rule out alternative process explanations related to contamination and social risk taking. Participants first completed four scales: interpersonal touch (Webb and Peck 2015), interpersonal trust (Yamagishi and Yamagishi 1994), contamination cognitions (Deacon and Olatunji 2007), and social risk taking (Blais and Weber 2006). Participants then completed two scales: attitudes toward interpersonal and non-interpersonal interactions in a store setting, which served as our dependent measures. Finally, participants completed a scale of loneliness (Russell 1996). The indirect effect on preferences for interpersonal haptic interactions through interpersonal trust and interpersonal touch was significant with Hayes Model 6 (Hayes 2017). Loneliness negatively affected interpersonal haptic interactions through its negative impact on both trust and touch.

In Study 3, we test our prediction that the indirect effect observed in Study 2 is moderated by active coping strategies. Participants completed a series of scales: preference for haptic-related (e.g., getting a massage) and non-haptic-related consumption (e.g., playing a videogame) activities, interpersonal touch, interpersonal trust, chronic loneliness, and active/passive coping strategies. As expected, the indirect effect of loneliness on preferences for haptic-related experiences through interpersonal trust and interpersonal touch was significant, but there was no difference in non-haptic-related experiences. Importantly, the indirect effect on haptic-related experiences was moderated by coping strategies: the negative effect was eliminated when participants adopted active coping.

In Study 4, we examined our underlying process using a moderation-of-process design, in which we manipulated interpersonal trust. Participants in the boost present condition read a fictitious newspaper article titled "People Are More Trustworthy than We Think" and wrote in support of the main argument. Conversely, those in the boost absent condition read a fictitious article titled "Shelf Efface-ment: How Not to Organize Your Bookshelves" and wrote in support of the argument. As expected, the moderated mediation model was significant (Hayes Model 8). The indirect effect of loneliness on haptic interactions through interpersonal touch was significant only in the trust boost absent condition. That is, the negative effect on haptic interactions was eliminated when trust was boosted.

Taken together, we show that, contrary to both common wisdom and the reconnection hypothesis (DeWall and Richman 2011), chronically lonely consumers eschew interpersonal haptic-related experiences because they lack interpersonal trust, which in turn lowers their comfort with interpersonal touch.

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What Else Are Out There?
The Positive Influence of Dissimilar Collectibles on Consumers' Collection Intention

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EXTENDED ABSTRACT

From Harry Potter wands, Darth Vader statues, to Lego Minifigures, collectibles are everywhere. Although companies in the collectibles industry have put in a lot of effort acquiring licenses, cooperating with notable partners (e.g., McDonald's Happy Meals), we know very little about the factors that motivate consumers to engage in the collecting behavior. It is even harder to predict what characteristics of the collectibles will drive consumers' interest.

We adopt Belk's (1995) definition of collection as "a process of actively, selectively and passionately acquiring and possessing things removed from ordinary use and perceived as part of a set of non-identical objects or experiences." When a consumer with no prior experience to start a collection, s/he has little knowledge about the variability of these products and the dimensions by which to evaluate and appreciate these products (Clarkson, Janiszewski, and Cinelli 2013). Thus, the first few experiences have significant impact on consumers' knowledge structure and preference formation (Hoeffler, Ariely and West 2006; Hoeffler, Ariely, West and Duclos 2013).

We propose that consumers' perceptions of the collection (e.g., its breadth, depth, complexity) largely depend on the first few product experiences they have. When the first few collectibles are perceived to be very different from one another, consumers tend to perceive a big information gap between what they have already known about the collection and the true characteristics of the collection. They tend to believe that any additional item in the collection would provide large marginal utility and help to update their knowledge about overall collection. The enhanced attention drawn to the information gap has been previously found to elicit the feeling of curiosity (Loewenstein 1994), which in turn motivates behaviors to close the knowledge gap. On the contrary, if the first few collectibles are similar to one another, it signals to consumers that the collection as a whole has a simple structure and that any additional item is less likely to provide unique contribution to the collection. As a result, the perceived small knowledge gap will reduce consumers' curiosity to find out more, which in turn lowers further collecting intention.

Hypothesis 1   *The similarity among the first few collectibles that the consumers possess will affect their collection motivation. Greater variance (i.e., dissimilarity) among the first few collectibles will predict higher collecting intention.*

Hypothesis 2   *The collection dissimilarity effect is mediated by feelings of curiosity.*

Study 1a provided initial evidence of the collection dissimilarity effect. Each participant was given three postcards as a gift and was asked to write down either three similarities or three differences of the same postcards. Participants who looked for dissimilarities offered higher price to get another postcard from the same series ($M = 4.47$) than those who looked for similarities ($M = 3.49$; $F(1, 87) = 6.21$, $p = .015$).

Study 1b replicated findings in study 1a using real payment. Participants were given three Lego minifigures, either similar or dissimilar to each other. Next, they were asked to offer a price to get a new limited-edition minifigure from the same collection series. Those who offered top-20 highest prices got the new item by paying the offered price. Results revealed that the average price offered in the dissimilar-item condition ($M = 17.32$) was significantly higher than that in the similar-item condition ($M = 6.55$; $F(1, 96) = 3.48$, $p = .033$).

Study 2 tested our proposed mechanism that the pattern of results is driven by one's curiosity about other items in the collection (H2). The procedures were similar to that in study 1b except that we added curiosity measures and used rated collecting intention as the dependent variable. As expected, participants in the dissimilar-item condition were more willing to collect the newly launched item ($M = 6.86$) than those in the similar-item condition ($M = 6.11$; $F(1, 124) = 4.44$, $p = .037$). Moreover, this effect was mediated by curiosity (CI [-1.23, -.07]).

According to our conceptualization, if additional information about the collection is provided to reduce the knowledge gap, the collection dissimilarity effect will be eliminated. For example, if the set size is known to be six in both similar-item condition and dissimilar-item condition, this new piece of information would serve as an anchor to reset the reference points, thus overrides the effect of similarity. Study 3 showed that when the set size was unknown, participants were more willing to collect when the items were dissimilar ($M = 3.76$) than similar ($M = 2.68$; $F(1, 135) = 8.66$, $p = .004$), replicating the results of the previous studies. When the set size was known to be six, however, this difference went away ($M_{\text{dissimilar}} = 3.19$ vs. $M_{\text{similar}} = 3.18$; $F < 1$).

Study 4 had three conditions (similar/theme, dissimilar/theme, dissimilar/ambiguous-theme) to test theme clarity as a necessary condition for our findings (H3). Study 4 also helped to rule out the alternative explanation based on satiation. According to satiation assumption, consumers should be more willing to collect in the dissimilar-item conditions, regardless of whether there is a clear theme underneath the collectibles. However, our theory suggests that items without a clear theme decrease curiosity, resulting in lower collecting intention. Results of study 4 support the latter possibility. Specifically, participants' collecting intention in the dissimilar/theme condition ($M = 5.62$) was higher than that in the other two conditions ($M_{\text{similar/theme}} = 4.99$, $F(2, 207) = 4.03$, $p = .046$; $M_{\text{dissimilar/ambiguous-theme}} = 4.75$, $F(2, 207) = 7.43$, $p = .007$). No significant difference was found between the latter two conditions ($F < 1$). Moreover, curiosity mediated this effect.

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Put the Cookies in the Jar:
The Presence of Food Decreases Enjoyment of Concurrent Consumption Experiences

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EXTENDED ABSTRACT

Consumers often engage in experiences in the presence of food they plan to consumer at a later point in time. For instance, diners at a buffet might eat their main dish in the presence of their dessert. Concert attendees might listen to a concert in the presence of a mouth-watering snack that they wait to consume until the show's intermission. Notably, existing research documents that the presence (vs. absence) of food *positively* affects the enjoyment of the food once it is consumed (Nowlis, Mandel, and McCabe 2004). However, in this research, we show that the presence of food *negatively* affects the enjoyment of the ongoing consumption experience.

We suggest that this negative effect occurs because the presence of food prompts mental imagery about the future consumption (MacInnis and Price 1987; Nowlis et al. 2004), subsequently decreasing consumer engagement with the current consumption experience. Because the degree to which consumers are engaged in an experience positively influences their enjoyment (Alba and Williams 2013; Higgins and Scholer 2009), we propose that the presence (vs. absence) of food will negatively impact enjoyment of the current consumption experience. In line with these predictions, we document the degree of engagement as the mediator of our effect (study 3) and highlight two theoretically derived boundary conditions. First, past research has shown that mental imagery is more likely to occur for highly sensory products but not for functional ones (Chan and Mukhopadhyay 2010; MacInnis and Price 1987). Building on this, we suggest that framing the food as functional (i.e., healthy) rather than hedonic (i.e., tasty) will decrease consumer likelihood to engage in mental imagery and, thus, reduce the negative effect of the presence (vs. absence) of food on the enjoyment of the focal consumption experience (study 4). Second, strengthening consumer engagement with the focal consumption experience should decrease consumers' ability to engage in mental imagery (Shiv and Huber 2000), and should also mitigate the negative effect of the presence (vs. absence) of food on enjoyment of the focal consumption experience (study 5).

Study 1 provides correlational evidence. Students in a dining hall ate dinner in the presence or absence of a dessert and indicated their enjoyment. Those who ate dinner in the presence of their dessert enjoyed the meal significantly less than those who ate in the absence of their dessert, $\beta = -.18$, $t = 2.23$, $p = .028$.

Study 2 was conducted at an outdoor concert. Concert attendees participated in our study in exchange for a $1 compensation and a chocolate chip cookie. Depending on condition, participants received the chocolate chip cookie at the beginning of the study and placed it in front of them while listening to the concert, or they received it at the end of the study. Those who listened to the music in the presence of the cookie enjoyed the music significantly less ($M = 6.30$, $SD = .90$) than those who listened in the absence of the cookie ($M = 6.60$, $SD = .51$), $t(146) = 2.52$, $p = .013$.

Study 3 demonstrated the mediating role of engagement. Participants in an on-campus student center spent five minutes coloring, and received two Milano cookies for participating. Those who colored in the presence of the cookies enjoyed coloring significantly less ($M = 5.90$, $SD = 1.05$) than those who colored in the absence of the cookies ($M = 6.28$, $SD = .81$), $t(99) = 2.05$, $p = .044$. In addition, those who colored in the presence of the cookies also felt significantly less engaged in the coloring task ($M = 4.84$, $SD = 1.33$) than

those colored in the absence of the cookies ($M = 5.36$, $SD = 1.09$), $t(99) = 2.16$, $p = .033$. Engagement mediated the effect of the presence (vs. absence) of the cookies on enjoyment of coloring (95% CI: -.3831, -.0156).

Study 4 showed that our effect is specific to hedonic food by manipulating the description of the same food (Kind bars), focusing on either its tasty or functional attributes. Participants then colored in the presence or absence of the snack. Results revealed the predicted interaction, $F(1,216) = 4.27$, $p = .040$. When the Kind bar's sensory attributes were emphasized, those who colored in the presence of the bar enjoyed coloring significantly less ($M = 5.28$, $SD = 1.53$) than those who colored in its absence ($M = 5.87$, $SD = 1.21$), $t(216) = 2.49$, $p = .013$. When the Kind bar's functional attributes were emphasized, there was no significant difference.

Study 5 showed that our effect requires the availability of cognitive resources. Students participated in a picture viewing study (we used pictures from the "Where is Waldo cartoon series); participants in the low-involvement condition looked at the pictures, whereas participants in the high-involvement condition attempted to find Waldo in each picture. They completed this task in the presences or absence of Pringles. Results revealed the predicted interaction $F(1,232) = 4.16$, $p = .043$. When the focal task required low cognitive involvement, participants enjoyed looking at the pictures significantly less in the presence of the Pringles ($M = 3.81$, $SD = 1.44$) than those who viewed the pictures in their absence ($M = 4.56$, $SD = 1.68$), $t(232) = 2.61$, $p = .010$. When the task required high cognitive involvement, there was no significant difference.

Whereas previous research demonstrated how the presence of food positively affects enjoyment, we document negative consequences for the ongoing consumption experience. From a practical perspective, this has important implications for companies in terms of how they structure their retail environments to enhance customer experience, which has recently been identified as a central objective amongst marketing managers (Lemon and Verhoef 2016; Verhoef et al. 2009). For instance, restaurants, or any industry whose focal activity is eating, should refrain from making desserts easily visible while customers are enjoying their main dishes. Conversely, for industries where eating is complementary, but not the primary focal activity, our research suggests that such companies should prevent customers from being exposed to food while engaging in the ongoing consumption experience.

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Pooling Finances and Relationship Satisfaction

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EXTENDED ABSTRACT

When couples decide to share their lives, they must also decide how to pool their finances. Can the way couples manage their money influence happiness in their relationship? Across five studies, we found that couples who pool all of their money together experience greater relationship satisfaction, compared to couples who keep all (or some) of their money separate. This effect is mediated by feelings of financial togetherness, making purchases and financial goals feel shared.

S1: Pooling Finances and Relationship Satisfaction. We first surveyed 1,005 married adults on MTurk. Participants reported their relationship satisfaction (Fletcher, Simpson, and Thomas 2000), as well as how they currently manage finances with their partner.

There was a significant effect of finance pooling on relationship satisfaction, $F(2, 1002) = 23.015$, $p < .001$. Those who pooled all of their money together were happier in their relationship ($M = 6.06$, $SD = .94$) than those who kept all of their money separate ($M = 5.44$, $SD = 1.23$), $t(1002) = 6.29$, $p < .001$. Those who partially pooled their money fell in between ($M = 5.77$, $SD = 1.03$), showing greater relationship satisfaction than those who kept their money separate, $t(1002) = 2.94$, $p < .001$, and less relationship satisfaction than those who pooled all of their money together, $t(1002) = 3.75$, $p < .001$.

S2: Pooling Finances and Relationship Dissolution. We next analyzed data from the British Cohort Study—a nationally representative study of children born in Britain during a single week in 1970. In the year 2000, participants reported how they pool money with their partner: "Pool all money" (n = 4311), "Pool some, separate rest" (n = 2104), or "Keep all money separate" (n = 1096).

We first ran an ordinal logistic regression predicting relationship satisfaction. Pooling money in joint accounts is associated with higher levels of relationship satisfaction than keeping money separate ($b = .60$, $SE = 0.07$, $z(6985) = 8.33$, $p < .001$). We next calculated how many couples stayed together or broke up as a function of whether they had pooled or separate accounts in the year 2000. The percentage of couples who broke up was lower for those who pooled their money, compared to couples who kept their money separate ($\chi^2 = 35.80$, $p < .001$).

S3: Separate vs. Joint Accounts in the Field. 181 participants in a committed romantic relationship participated on their way to a college football game. They were given a plastic bag with $1 worth of nickels that they could use to buy a mug, and were randomly assigned to write their name on a sticker and place it on the plastic bag (separate condition), or write their name *and* their partner's name on a sticker and place it on the plastic bag (joint condition).

Participants subsequently rated their degree of relationship satisfaction. Those who had been randomly assigned to think of their money as joint were happier in their relationship ($M = 4.40$, $SD = .64$), than those who had been randomly assigned to think of their money as separate ($M = 4.18$, $SD = .67$), $t(179) = 2.25$, $p = .026$.

S4: Why Pooling Finances Increases Relationship Satisfaction. We surveyed 1,012 married participants on MTurk. Participants reported their relationship satisfaction, as well as their perceived financial togetherness, indicating the extent to which they view their possessions and financial goals as shared (1 = totally mine, 7 = totally shared). Lastly, participants indicated how they currently manage their finances.

We again found a significant effect of finance pooling on relationship satisfaction, $F(2, 1010) = 18.477$, $p < .001$. Those who pooled all of their money were more satisfied in their relationship ($M = 6.15$, $SD = 1.16$) than those who kept all of their money separate ($M = 5.42$, $SD = 1.53$), $t(1010) = 5.68$, $p < .001$. Those who partially pooled their money fell in between ($M = 5.85$, $SD = 1.31$). We next entered feelings of shared money, shared possessions, and shared financial goals as mediators into the same model. Feelings of shared possessions (CI = .23, .53) as well as shared financial goals (CI = .51, .91) mediated the relationship between account pooling and relationship satisfaction.

S5: When Pooling Does Not Increase Relationship Satisfaction. We next conducted a lab study amongst 76 undergraduate couples (n = 152 participants). Participants played the Lemonade Stand video game with their partner. They were randomly assigned to run their own lemonade stand with separate money (separate condition) or to run a lemonade stand together with joint money (joint condition). After four rounds of the game, they each rated their degree of relationship satisfaction.

The results showed a significant interaction between account pooling and the duration of the couple's relationship ($b = -2.27$, $z(150) = -3.19$, 95% CI = [-3.66, -.87], $p = .001$). Those in an established relationship (i.e., who had been together for 12 months or more; $n = 30$ couples; 60 participants) reported greater relationship satisfaction if they had played the game from a joint rather than separate account ($b = 1.18$, $z(58) = 2.02$, 95% CI = [-2.33, -.04], $p = .043$). However, among those in a newer relationship (i.e., had been dating less than 12 months; $n = 46$ couples; 92 participants), partners who had a joint account reported *lower* relationship satisfaction than those with separate accounts ($b = -1.19$, $z(90) = 2.79$, 95% CI = [.36, 2.03], $p = .005$).

These findings suggest that whether couples' pool their money or keep it separate can impact their relationship satisfaction, as well as their likelihood to stay together. This work contributes to our understanding of financial decision-making within couples (Dew 2007; Rick, Small, and Finkel 2011; Smock, Manning, and Porter 2005) by focusing on the downstream effects such decisions have on relationship well-being. These findings also speak to research on the disconnecting power of money (Mogilner 2010; Vohs 2015; Vohs, Mead, and Goode 2006) by showing that the way people manage their money can disconnect (or connect) them from even their most loved.

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The Role of Culture and Message Framing:
Evaluating Hispanic Consumers' Response to Healthy Eating Appeals

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EXTENDED ABSTRACT

Increasing overweight and obesity rates within the US have emphasized the need to identify marketing communication strategies to persuade healthy behavior. Given the Hispanic population's growth proportion in the US, obesity rates and related illnesses are alarming within this community. In 2015, Hispanic Americans were found to be 1.2 times more likely to be obese than non-Hispanic whites (OMH 2017). Hence, understanding Hispanics' cultural-identity and attitudes toward healthful consumption is vital to encourage their healthy choices (Du, Sen, and Bhattacharya 2008; Luna and Peracchio 2005; Torres and Briggs 2005) and will help marketing managers to design effective marketing appeals that enhance healthful behaviors among this at-risk community.

While extant research shows that consumers are persuaded by self-construal (Aaker and Lee 2001; Lee, Aaker, and Gardner 2000; Pounders, Lee, and Mackert 2015) as well as message framing (Aaker and Lee 2001; Smith and Petty 1996; Yoon and Ferle 2018), less is known about the role of culture in the effectiveness of brands' health appeals to increase Hispanic consumers' healthful choices. Are Hispanics more persuaded to make healthful food choices when appeals are congruent (versus incongruent) with their self-construal? Do Hispanics' perceptions of healthy eating influence their attitudes toward health appeals? We address these questions by evaluating Hispanic consumers' self-construal as well as their cultural perceptions of healthy eating.

Hispanics are considered to have an interdependent self-construal, compared to non-Hispanic Americans, who have an independent self-construal (Aaker and Williams 1998; Lee et al. 2000; Markus and Kitayama 1991). Thus, we posit a cultural-identity incongruent effect given Hispanics' perception of healthy eating as an individual activity. We show that interdependent (vs. independent) consumers are more persuaded by self (vs. social) framed healthy eating appeals. We further propose that this effect is mediated by Hispanics' cultural perceptions of healthy eating and moderated by message framing.

Health Appeals and Message Framing

Past research suggests that brands' health-related messages significantly influence consumer's attitudes, emotions, and behaviors. These messages are designed to increase healthy consumption by discouraging unhealthy lifestyle and food choices (Andrews, Netemeyer, and Burton 1998; Goldberg et al. 2006; Naylor, Droms, and Haws 2009). For instance, patients are more persuaded to seek timely medical treatment when health messages match their information processing system (Williams-Piehota et al. 2003), and the absence of nutritional labels positively affects French consumers' perceptions of food (Gomez and Torelli 2015).

The effectiveness of these health advertisements and labels depend both on message content and consumers' characteristics (Pechmann and Catlin 2016). Indeed, messages tailored to match consumers' characteristics are effective means of persuading consumers to engage in healthier choices and behaviors (Schneider et al. 2001). Messages can be tailored to the individual (self) such as occupation and preferences, or to the group (social) such as race, culture or ethnicity (Kreuter and Skinner 2000), and has been found to influence consumer behavior and choices (Aaker and Lee 2001; Maheswaran and Meyers-Levy 1990).

In the context of eating, health appeals have distinct effects on consumers depending on their self-views. Independents (vs. interdependent) are more persuaded by promotion (vs. prevention) appeals (Aaker and Lee 2001). However, less is known about how interdependent versus independent consumers respond to social versus self-framed appeals that match (mismatch) their self-construal. Thus, we examine Hispanic consumers' response to healthy eating appeals that contain self or social-framed messages.

Hispanic Self-Construal: Interdependent Versus Independent

Cross-cultural research suggests that the self-concept is formed by the way individuals see themselves regarding others within a group, or a community. Easterners tend to have more interdependent attitudes and behaviors, whereas Westerners are more individualistic (Markus and Kitayama 1991). Individualistic communities focus on the personal self, whereas collectivistic communities focus on the social self, relating to other members of their community. These cultural differences guide consumers' choices, behavior, and responses to marketing appeals (Aaker and Lee 2001; Aaker and Williams 1998; Markus and Kitayama 1991).

While cultural and social aspects exist within the individual, these may vary in strength and across ethnicities (Aaker and Lee 2001). Non-Hispanic Westerners are considered to be more independent given their focus on themselves as individuals, whereas Hispanics are considered to be more interdependent given their focus on the community (Aaker and Williams 1998; Lee et al. 2000; Markus and Kitayama 1991). Thus, this paper examines Hispanics' response to healthy eating messages that are congruent (social-framed) and incongruent (self-framed) with their interdependent self-construal.

Hispanic Cultural Perceptions of Healthy Eating

Food consumption is influenced by cultural values (Block et al. 2011; Levine et al. 2016), which create eating patterns and choices, and can be seen as predominantly an individual or social activity. Notably, in the context of eating, Hispanics view food as a means of cultural expression (Peñaloza 1994) and are more likely to eat socially with friends and family than alone (MSLGroup Americas 2013). Although Hispanics regard family mealtimes as an important aspect of their cultural values, their family meals generally consist of less nutritious options compared to non-Hispanic consumers in the US. For instance, 15.9% of Hispanic households consume family meals that consist of fast food items, three or more times per week, compared to 9.6% of non-Hispanic Whites and 7.7% of non-Hispanic Blacks (Boutelle et al. 2007).

Additionally, parental healthy (unhealthy) behaviors significantly affect children's healthy (unhealthy) behaviors because of repetitive consumption patterns at home, which persists through adulthood (Moore, Wilkie, and Desrochers 2016). Consumers who have been exposed to unhealthy food consumption practices in their family are likely to have more difficulty in making healthy choices in the future and in achieving healthy eating habits given the calorie-dense foods commonly served in Hispanic households and gather-

ings (MSLGroup Americas 2013). That is, Hispanic consumers are more likely to perceive healthy eating as an individual activity rather than a social activity. Thus, it is likely that social-framed healthy eating appeals, although congruent with Hispanics' self-construal, might not generate the intended persuasive effects.

Hence, we hypothesize that Hispanic (interdependent) consumers compared to non-Hispanic (independent) consumers will be more persuaded by self (vs. social) framed healthy eating appeals. Furthermore, Hispanics' cultural perceptions of healthy eating as an individual (versus social) activity, will drive the proposed effects of self-construal on attitudes toward healthy eating appeals. Additionally, message framing (self vs. social) will moderate the effects of self-construal on healthy eating appeal attitudes through cultural perceptions of healthy eating.

BEHAVIORAL STUDY: SELF-CONSTRUAL AND HEALTHY EATING CHOICES

Participants, Method, and Design: 115 undergraduate students (60.9% female; M_{Age} = 22.6) participated in a 2 (self-construal: independent, interdependent) x 2 (message frame: social, self) between-subjects design.

Participants first completed self-construal priming tasks (Aaker and Lee 2001) followed by manipulation checks. Then, they saw either a social or self-framed advertisement. Next, they were given the opportunity to choose a snack: healthy (baked potato chips) or unhealthy (fried potato chips), which served as our primary dependent variable. Then, they indicated their perceptions of the message as being social or individual focused (α = .955), reported how much they identified with the Hispanic culture, and provided theirs and their parents' country of origin to get a measure of participants' generation. They also completed health habits measures which were used as covariates in order to avoid any possible confound on the basis of cultural identity, generation and, diet. Finally, they completed basic demographic questions.

Results and Discussion

Self-Construal Manipulation Checks. Participants in the interdependent condition reported to have more collectivistic thoughts compared to those in the independent condition ($M_{interdependent}$ = 3.37, SD = 2.28; $M_{independent}$ = 2.48, SD = 1.72; F (1, 114) = 5.55, p = .02).

Message Framing Checks. Participants in the social-framed condition reported the message was more social-focused compared to those in the self-framed condition, who reported the message they saw was more individual-focused ($M_{social-framed}$ = 5.77, SD = 1.36; $M_{self-framed}$ = 1.82, SD = 1.36; F (1, 114) = 241.88, p < .001).

Snack Choice. Results from a hierarchical regression analysis show a marginally significant effect for the interaction term (β = -1.423, t (1, 114) = 2.93, p < .087). A spotlight analysis of snack choice shows that in the interdependent condition, there was significant differences of participants snack choices (self = .33, social = .65, p = .02), whereas in the independent condition, there was no significant differences (self = -.24, social = -.33, p = .88).

Discussion. This research supports that interdependent consumers will make healthier food choices when prompted with a self-framed compared to a social-framed appeal, confirming the incongruent consumption behaviors in food-related contexts.

STUDY 1: SELF-CONSTRUAL AND HEALTHY EATING APPEALS

Participants, Method, and Design: 159 undergraduate students (47.2% female; M_{Age} = 22.5) completed a 2 (self-construal: independent, interdependent) x 2 (message frame: social, self) between-sub-

jects study. Participants completed the same self-construal priming tasks and stimuli as in the previous behavioral study. They also indicated their message perceptions about the advertisement (Reichert, Heckler, and Jackson 2001; α = .888). Finally, participants reported identification with the Hispanic culture (α = .975), theirs and their parents' country of origin, dietary habits, and basic demographic questions.

Results and Discussion

Self-Construal Manipulation Checks. Participants in the interdependent condition reported to be significantly thinking more about the group, compared to participants in the independent condition ($M_{interdependent}$ = 5.86, $M_{independent}$ = 4.56; F (1, 155) = 31.35, p = 0.000).

Appeal Persuasion. The two-way ANCOVA results revealed a significant interaction effect, (F(1, 155) = 4.68, p = .032) after controlling for the Hispanic cultural-identity, generation, and food restriction. In the interdependent condition, participants are more persuaded by self-framed healthy eating appeals (M_{Self} = 4.03, SD = 1.80) than by social-framed (M_{Social} = 3.19, SD = 1.24), t = -2.43, p = .017). However, participants in the independent condition did not differ in their attitudes after exposure to self-framed healthy eating appeals ($M_{Self-Framed}$ = 3.55, SD = 1.48) compared to social-framed appeals ($M_{Social-Framed}$ = 3.68, SD = 1.67, t = .356, p = .723).

Discussion. Findings from this study assert that Hispanic consumers respond more favorably to self-framed than social-framed healthy eating appeals.

STUDY 2: HISPANICS' CULTURAL PERCEPTIONS OF HEALTHY EATING

In this study, we examine actual Hispanic versus non-Hispanic consumers by using participants' self-reported culture and also evaluates the predicted moderated mediation.

Participants, Method, and Design: 149 undergraduate students (50% Hispanic; 53% Female, M_{Age} = 23) participated in a 2 (culture: Hispanic vs. Non-Hispanic) x 2 (message framing: self vs. social-framed) between-subjects factorial design.

Participants were shown either the self-framed or social-framed advertisement and reported their attitudes toward the advertisement (Sprott and Shimp 2004). Next, they completed lifestyle questions, which assessed their cultural perceptions of healthy eating as either a social or individual activity, followed by demographic questions.

Results and Discussion

Pretest. 52 participants (53.8% Female; 52% 25-34 years old) completed the pretest to ensure that there were no differences in argument strength and the message framing was significantly perceived as either self or social framed. A one-way ANOVA revealed that participants rated the self-framed ad as significantly more individualistic, ($M_{self-framed}$ = 5.21, 1.28; $M_{social-framed}$ = 3.18, SD = 1.74; F(1, 51) = 22.89, p = .000), and the social-framed ad as significantly more social, ($M_{self-framed}$ = 4.5, SD = 1.55; $M_{social-framed}$ = 5.89, SD = .88, F(1, 51) = 15.85, p = .000). There was no significant differences between the advertisements in terms of attitudes ($M_{self-framed}$ = 5.40, SD = 1.25; $M_{social-framed}$ = 5.66, SD = 1.14, F(1, 51) = .631, p = .431), and message argument ($M_{self-framed}$ = 5.04, SD = 1.65; $M_{social-framed}$ = 5.18, SD = 1.49, F(1, 51) = .105, p = .747).

Ad Attitude. A two-way ANOVA on the attitudes index revealed a significant interaction effect (F(1, 149) = 6.75, p = .01). Non-Hispanics demonstrated similar attitudes for self and social framed appeals ($M_{self-framed}$ = 4.26, SD = 1.32, $M_{social-framed}$ = 4.71, SD = 1.39; t = -1.425, p = .159), while Hispanics had significantly greater attitudes for self-framed appeals ($M_{self-framed}$ = 4.95, SD = 1.07; $M_{social-framed}$ =

4.34, $SD = 1.13$; $t = 2.37$, $p = .021$). These findings replicate those of the second study.

Cultural Perceptions of Healthy Eating. A two-way ANOVA on the cultural perceptions index showed a significant interaction of culture and message framing ($F(1, 149) = 4.723$, $p = .031$). After exposure to the self-framed ad, Hispanics reported similar cultural perception scores of eating as non-Hispanics ($M_{Hispanics} = 5.05$, $SD = 1.21$, $M_{Non-Hispanics} = 4.68$, $SD = 1.45$; $t = -1.203$, $p = .233$). However, after exposure to the social-framed ad, Hispanics reported a lower cultural perception score than non-Hispanics ($M_{Hispanics} = 4.76$, $SD = 1.39$; $M_{Non-Hispanics} = 5.34$, $SD = 1.31$; $t = 1.88$, $p = .06$).

Moderated Mediation. Results from a moderated mediation analysis (PROCESS Model 7; Hayes 2013) indicated that the indirect effect of self-construal on ad attitude through cultural perceptions score and message framing was significant (ß = -.1404, $SE = .1043$, 95% $CI = -.4248, -.0051$). Conditional indirect effects for both levels of the moderator included zero, self-framed messages, (ß = .06, $SE = .06$; 95% $CI = -.02, .23$) social-framed messages (ß= -.08, $SE = .07$; 95% CI: -.29, .001) (see Appendix).

Discussion. Study 2 demonstrates that Hispanic consumers exhibit identity incongruent attitudes by responding more favorably to self-framed rather than social-framed messages. Further, results show cultural perceptions of healthy eating mediates the relationship between self-construal and advertisement attitudes, moderated by message framing.

DISCUSSION AND IMPLICATIONS

The fight against the current overweight and obesity epidemic requires a culturally relevant approach in the dissemination of information or advertising and promotion (World Health Organization 2014). Hence, this study provides empirical evidence of the most effective healthy eating appeal types among Hispanics. Across three studies, we identify that contrary to common belief, self-framed compared to social-framed health appeals will be most persuasive for Hispanics to make healthier food choices.

This study contributes to the marketing literature by bridging the areas of health marketing and culture and affirms the influence of culture by demonstrating a backfire effect of identity congruence on health marketing communications. From a managerial perspective, this research identifies the most persuasive appeals to promote health and wellness within the Hispanic community. Thus, marketing managers can integrate these findings into the effective development of health marketing campaigns to increase healthful food choices within the Hispanic community in an effort to mitigate the obesity epidemic within this growing minority group. When targeting Hispanics, marketers should be careful about designing identity-congruent health appeals, as in some instances these may be ineffective and perhaps even counterproductive.

Finally, this research also contributes to the well-being of Hispanic consumers by considering the cultural relevance of health communications which will educate, reach, and persuade Hispanic consumers to make more healthful food choices that will benefit them, their families and positively change the course of their future generations. Future research could expand the understanding of the Hispanic community, as well as other at-risk minority groups by examining the effects of both online and offline social and self-framed appeal types in other health-promoting contexts such as exercising and physical activity.

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The Power of Self-Effacing Brand Messages: Building Trust and Increasing Brand Attitudes

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EXTENDED ABSTRACT

Self-effacement and self-enhancement are impression management strategies used to present oneself to others (Yik et al. 1998). Psychology literature establishes that humans use self-effacement and self-enhancement impression management strategies to present themselves to others. Self-effacement involves presenting oneself with humility by de-emphasizing or diminishing the value of attributes and accomplishments, with the intent to maintain modesty and avoid offending others (Xiaohua Chen et al. 2009). On the contrary, self-enhancement involves presenting oneself in an overly positive manner that others may consider boastful, arrogant, or narcissistic (Dufner et al. 2013).

These conflicting impression management strategies, while typically explored in the context of interpersonal communications, are regularly used in brand marketing communications For instance, Swedish brand, Oatly, has established a strong global market presence using unassuming marketing messages such as, "We are not a perfect company, not even close, but our intentions are true." While Starbucks boasts that, "If your coffee isn't perfect, we'll make it over. If it's still not perfect, make sure you're at Starbucks."

Past research shows people respond more favorably to humble compared to more boastful others (Wosinska et al. 1996). For instance, people tend to negatively (positively) evaluate self-enhancing (self-effacing) individuals (Hoorens 2011), and since consumers perceive brands similarly to how they perceive other people (Park, Jaworski, and MacInnis 1986), we predict that consumers will feel more positively toward brands that use self-effacing rather than self-enhancing messages.

Hypothesis:	*Consumers' brand attitudes will be higher for brands that use self-effacing rather than self-enhancing brand messages.*

Persuasion knowledge theory suggests that consumers attempt to figure out the motives behind marketers' attempts to influence consumption choices (Friestad and Wright 1994). Consumers' persuasion knowledge activates when consumers become skeptical of the marketer's intent (Kirmani and Zhu 2007). Skepticism affects trust judgements (Otto, Thomas, and Maeir 2018), and trust influences consumers' attitudes (Li and Miniard 2006). In this research, we propose that self-effacing (self-enhancing) messages will decrease (increase) consumer skepticism, thus increasing (decreasing) brand trust, leading to greater (lower) brand attitudes. Formally:

Hypothesis:	*Skepticism and trust will sequentially mediate the relationship between impression management approach and brand attitudes.*
Hypothesis:	*Self-effacing (self-enhancing) brand messages lead to lower (higher) skepticism.*
Hypothesis:	*Lower (higher) skepticism leads to higher (lower) brand trust.*
Hypothesis:	*Higher (lower) brand trust leads to higher (lower) brand attitudes.*

Finally, we predict efficacy importance as a key moderator in the proposed effects of impression management style on brand attitudes. Across four studies, including two behavioral studies, we evaluate our predicted conceptual model to confirm our hypotheses and reveal important theoretical and managerial implications

Study 1: Participants (N = 110) completed a single factor, two level (impression management strategy: self-effacing vs. self-enhancing) between-subjects study with brand attitudes and trust as dependent variables. Results revealed that participants in the self-effacing condition reported greater trust for the brand (M_{eff} = 5.13, SD = .92, M_{enh} = 4.43, SD = 1.52; $F(1, 109)$ = 8.61, p = .004), and brand attitudes (M_{eff} = 6.52, SD = 3.25, M_{enh} = 5.31, SD = 2.89; $F(1, 109)$ = 4.25, p = .042). A mediation analysis demonstrated that brand trust mediated the effect of impression strategy on brand attitudes (β = -1.13, SE = .38, 95% CI = -1.89 to -.40).

Study 2: Participants (N = 153) completed a single factor, two level (impression management strategy: self-effacing vs. self-enhancing) between-subjects study with brand attitudes, skepticism and trust as dependent variables. Results replicated those of study 1. Further, consistent with our hypothesis, a serial mediation analysis revealed that skepticism and brand trust sequentially mediate the effect of impression strategy on brand attitudes (β = -.27, SE = .09, 95% CI = -.50 to -.13).

Study 3, Behavioral: Participants (N = 180) completed a single factor, two level (impression management strategy: self-effacing vs. self-enhancing) between-subjects study with purchase quantity as dependent variable. A logistic regression with impression management strategy on purchase behavior (coded 0: no purchase and 1: purchase) revealed that participants in the self-effacing condition were significantly more likely to purchase bars than participants in the self-enhancing condition (B = 1.39, Wald(1) = 15.24, p < .001). Further results revealed that from those participants who purchased, those in the self-effacing condition purchased significantly more bars than did those in the self-enhancing condition (M_{eff} = 1.15, SD = .38, M_{enh} = 1.03, SD = .16; $F(1, 121)$ = 4.74, p = .031).

Study 4, Behavioral: Participants (N = 212) completed a 2 (impression management strategy: self-effacing vs. self-enhancing) x 2 (product encounter: control vs. product trial) study with efficacy importance as the main dependent variable. Results from this analysis revealed that when efficacy importance is high, participants in the self-enhancing (self-effacing) condition are significantly more likely to take the advertised (non-advertised) brand (B = 1.33, Wald(1) = 5.73, p < .001), demonstrating a moderating effect of efficacy importance.

Across these four studies (Appendix A) we find that attitudes are more positive for brands using self-effacing as opposed to self-enhancing communications and this relationship is mediated first by skepticism and then by brand trust. Self-effacing (self-enhancing) messages lead to lower (higher) skepticism which then leads to increased (decreased) brand trust and ultimately higher (lower) brand attitudes. Importantly, we find that self-effacing brand communications also lead to greater purchase likelihood and among those who make a purchase, a greater quantity is purchased when the brand uses self-effacing as opposed to self-enhancing brand communications.

While the benefits of using a self-effacing impression management strategy are clear, our results also indicate a boundary

condition. Specifically, when choosing between an advertised and unknown brand, people who consider product efficacy to be more (less) important are more likely to choose the advertised brand when it is associated with self-enhancing (self-effacing) messages. By identifying the effect of these communication approaches on consumers' brand trust, attitudes, choices, and purchases, we provide a framework for more effective advertising content that helps brands build more desirable consumption journeys, thus cultivating their customer asset and share of wallet.

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Food Waste as the Consequence of Competing Motivations, Insufficient Abilities and Lacking Opportunities

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EXTENDED ABSTRACT

Consumers can adjust the content of their shopping cart or the amount they cook on a daily basis. Rationally, they would also adjust these behaviors, after having discarded surplus foods, as they are known to dislike the negative monetary, moral and environmental impacts of food waste (Roodhuyzen et al., 2017). Yet, in practice consumers do not alter their food handling behaviors and continue to waste high amounts of foods (Roodhuyzen et al., 2017). The question is why: are consumers not motivated enough to prevent food waste, or are they unable to act upon such a motivation?

Research on food waste has shown that consumers' perceived importance given to avoiding the negative impacts of food waste, indeed influence intention setting (Roodhuyzen et al., 2017). Yet, unknown is how important consumers find food waste prevention relative to other (food related) goals (Steg et al., 2014; Nielsen, 2017). This is unfortunate as consumers are less likely to set an intention when higher prioritized competing goals are present (Nielsen, 2017). Additionally, it is unknown which factors may hinder consumers in implementing their intention (Nielsen, 2017; Hebrok & Boks, 2017), despite the known intention-behavior gap (Sheeran, 2016).

A framework that allows for investigating these open ends is the Motivation, Ability and Opportunity framework (MOA) (Rothschild, 1999; Thøgersen, 1995). This framework has proven its theoretical effectiveness in several fields (Brug, 2008; Siemsen, Roth & Balasubramanian, 2007) and is praised for its practical implications regarding interventions (MacInnis, 1991). In the context of food waste, this framework assumes that consumers will avoid food waste, if it is (sufficiently) in their self-interest and if they have the abilities (skills and knowledge), as well as the opportunities (external structures) to do so.

Results of twenty-four focus groups performed in four European countries (Germany, Hungary, Spain and The Netherlands), confirm that participants aim to avoid food waste for monetary, moral and environmental reasons. Yet, when placed in the context of daily life, a large variety of situations emerged in which other goals appeared more important than food waste prevention. These competing goals concerned ensuring having enough safe, healthy and tasty food in the household. The prioritizing of competing goals over food waste prevention did not leave participants indifferent. When they realized the incongruence between their disapproval of food waste and their own behaviors they tend to experience unease. This ambiguity, or cognitive dissonance (Harmon-Jones & Harmon-Jones, 2007), is known to be rarely solved by changing behaviors, as this is an effortful solution. Rather, attitude change (Harmon-Jones & Harmon-Jones, 2007) or trivialization (Simon, Greenber and Brehm, 1995) are more common strategies to reduce the level of unease. Also in this study, changing behaviors to prevent food waste was considered to be difficult and effortful, if not, impossible. Instead, mixed and even positive feelings towards food waste were expressed and its negative impacts trivialized.

Food waste prevention appeared to be difficult due to the many uncertainties linked to it (i.e., fluctuating appetites, changing taste preferences, product quality), combined with the limited amount of available resources (i.e., time, energy and money). Abilities were shown to impact how well participants can deal with these uncertainties, particularly their planning, storing and cooking skills. Opportunities were shown to impact how much uncertainties (e.g., changing appetites or food qualities) participants encounter as well as how much resources they have available. In particular, their (household members') dynamic and changing daily schedule was of influence, as well as their available storing space, their stores' supply and their stores' accessibility.

These results imply that from a consumers' perspective, foods are bought and cooked first and foremost to bring food on the table and in this process, the focus tends to lie on ensuring satiety, food enjoyment, healthy eating and time efficiency. Similar to other sustainability behaviors (Steg et al., 2014), the normative goal of food waste prevention is typically outweighed by these other hedonic (e.g., food enjoyment) or gain (e.g., time efficiency) goals. Waste prevention may not even be an issue that is salient for consumers when handling food, as is also indicated by the absence of food waste prevention as a motivation in studies investigating dominant food motives (Steptoe, Pollard and Wardle, 1995; Sobal, Bisogni 2009). Thus, consumers seem to waste food due to the presence of competing goals, rather than due to a lack of perceived importance assigned to it. This implies that consumers are most likely best served by interventions that improve their abilities and opportunities, as this will help them align their valued goals with food waste prevention.

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Gender-Class Intersectionality: Identity Projects of Married Women in Urban India

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EXTENDED ABSTRACT

When my mother opens her mouth
To have a conversation at dinner
My father shoves the word hush
Between her lips and tells her to
Never speak with her mouth full
This is how the women in my family
Learned to live with their mouths closed
Rupi Kaur, Milk and Honey (2016)

In his theory of distinctions in taste, Bourdieu (1984) largely presented women as markers of taste, to enhance the symbolic capital held by men, a view challenged by feminist critics (e.g., Lovell 2000; Skeggs 2004). While he subsequently addressed gender disempowerment (Bourdieu 2001), he did not particularly relate this to class. The primacy of occupational and educational status -- versus gender -- in determining social class position is thus still unclear (McCall 1992). We attempt to shed some light on social class organization as we study gender inequality using the lens of cultural and symbolic capital (Bourdieu 1984; Holt 1998; Üstüner and Thompson 2012). Specifically, we study identity projects adopted by married women from different classes as they relate to empowerment.

India offers an under-researched and theoretically important context in which to study gender inequality and social class. It's a hierarchical society, where economic chasms create stark differences in habitus across classes, castes, and genders, with rapidly emerging forms of symbolic capital (Vikas, Varman and Belk 2015). The society continues to be deeply patriarchal, and thus, exemplary of the pattern Bourdieu (2001) labeled *Masculine Domination*. The gender gap index, a measure of gender disparity developed by the World Economic Forum, finds India ranked 101st out of 136 countries, while the gender ratio stood at a mere 940 women per 1000 men in 2015, with unabated female feticide. This discrepancy is accentuated among lower social classes (Bhattacharya and Belk 2017; Belk and Ghoshal 2017), with female education and empowerment continuing to be a challenge. Women from patriarchal societies are understood to occupy a lower position of power and status, resulting in lower symbolic capital, as compared to men (Sobh and Belk, 2011). Hence belonging to an upper socioeconomic class may not automatically make women capital-accumulating subjects. We take an intersectionality perspective (Crenshaw 1991; Gopaldas 2013) to comparatively assess how women from low and high social classes distinctly negotiate gender inequality in this patriarchal class context, and observe how this manifests into unique identity projects. We suggest that gender capital intersects with economic, social, and symbolic capital, and impedes the acquisition of cultural capital.

We conducted 28 in-home depth interviews with female informants from upper and lower socioeconomic classes in three Indian cities- Hyderabad, Chandigarh and Delhi -- to ascertain their cultural and symbolic capital resources (empowerment) and observed consumption in multiple contexts. Not only did our low cultural capital (LCC) informants describe a general lack of power over routine decisions -- including how to dress -- many also mentioned the lack of autonomy to make decisions regarding their socializing, including an explicit mandate from some husbands that their wives not go out alone. They believe strongly that external powers control their destinies, and indulge in precautionary consumption such as religious rituals and superstitious artifacts that "ward off the evil eye," for example. An important point of difference from Holt's (1998) U.S. context is the role of consumption objects, which may have lost relevance in the less hierarchical and more anonymous American culture, but are still of paramount importance in this hierarchical society where material consumption marks a relatively easy way to convey one's social standing and attain respect from other members of society (Vikas et al 2015). LCCs feel empowered by acquisition of such consumption objects, however this objectified cultural capital does little to enhance their symbolic capital, which is largely rooted in the habitus. While institutionalized cultural capital such as that acquired via education and employment would be truly empowering, lower class women are prevented from such acquisition by virtue of symbolic domination. In this sense they remain trapped in a quagmire of disempowerment (Belk and Ghoshal 2017). Their identities are defined by their families and communities via taste conformation to the social norm, and they project their aspirations for more empowered identities onto their children. In contrast, high cultural capital (HCC) women are empowered to define their individual identities through taste distinctions, and show proclivity towards acquisition of institutionalized cultural capital such as expertise in specialized domains in order to negotiate gender inequality.

This research seeks to provide a greater theoretical understanding of social class organization and determinants of gender and symbolic capital in a rapidly emerging economy. We illuminate the mutable primacy of gender and socioeconomic condition in determining class positions in a hierarchical and patriarchal society. Specifically, it is important to take an intersectionality perspective when studying female disempowerment in emerging contexts. Marketers can use our findings to position and target products, and frame empowering communication messages to lower social classes.

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"I'm in Love with the Shape of Me!" Product Curvature Preferences as a Coping Strategy

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EXTENDED ABSTRACT

This research investigates whether preference for product curvature or angularity may be influenced by self-perceptions about the curvature of one's own body. For women, satisfaction with their body shape, or body shape self-esteem, determines whether there is assimilation or contrast with respect to their product curvature preferences. Comparative evaluation of own body image against idealized images subjects women to feelings of self-discrepancy (Festinger 1954; Richins 1991;Wan et al 2013). A subsequent product evaluation task affords a means of coping (Mandel et al 2017), with an affinity towards products that reflect either the "current satisfactory" or "ideal desired" body shape. When body shape satisfaction is high, there is a positive correlation (or assimilation) between one's own curvature and preferred product curvature or angularity. However, when body shape satisfaction is low, there is contrast between own body shape and product curvature preferences - a dissociation coping strategy (Mandel et al 2017; White and Argo 2009).

In study 1, 293 female Amazon M-Turk workers participated in a one factor (body shape = salient/not salient) study. Half completed a body-shape evaluation task, presented as a "Health and Fitness study," prior to a product evaluation task ("salient" condition) while the sequence was reversed for the other half ("not-salient" condition). In the purported health and fitness study, participants comparatively assessed themselves on weight, health and fitness and indicated their body shape from a chart of female body types varying in curviness (figure 1), and assessed the "curviness" and "boxyness" of their own shape. In the subsequent "Product Evaluation" task (administered first in the "non-salient" condition), participants evaluated 15 product images, either angular or curvy, on liking.

A composite average liking score for all angular products was the dependent variable. The mean-centered own body curviness score was the main independent variable. Salience of body shape (0= not salient/1 = salient) was the independent factor while the mean-centered body shape satisfaction variable was the proposed moderator. The estimated coefficient for salience was significant and negative ($\beta = -.22$, t = -2.51, $p = .01$), while the two-way interactions were not significant. The anticipated three-way interaction was significant and negative ($\beta = -.05$, t = -3.74, $p = .0002$). A spotlight analysis revealed that those high on net curviness who are less satisfied with their body shapes show increased liking for angular products (contrast), arguably a dissociation strategy (White and Argo 2009; Wan et al 2013). There was no correlation in the non-salient condition. The moderating role of product type is investigated in study 2.

In study 2, 256 female participants completed a body shape evaluation prior to product evaluation where they indicated preferences between curvy and angular product pairs on semantic differential scales across different product categories, pretested to be high and low on self-referent (Sirgy 1982; figure 2). Control product pairs differing on aspects other than curvature were included to mask the purpose of the research.

The average score across all test pairs (higher indicating preference for curvy) was the dependent variable. The main independent variable was mean-centered body curvature, a composite of the two scales measuring body curviness ($\alpha = .63$). A category-specific self-referent score was the first, while individual body shape satisfaction was the second moderator. Own body curvature was significant and positive ($\beta_{bc} = .08$; t = 2.05, p= .04), indicating that more curvy women preferred curvy products (a main effect). However, the interaction of interest was the moderating effect of body shape satisfaction and self-referent on the slope (β_{bc}). When body satisfaction is high (+1 SD), the slope of body curvature is positive, or there is assimilation between own body and preferred product curvature. However, when body satisfaction is lower (-1 SD), this slope is negative but only for products high on self-referent (+1 SD). In other words, contrast preferences, or dissociation coping behavior is only seen for products high on self-referent.

In Study 3, we investigate the impact of bolstering body shape satisfaction on the relationship between body shape and product curvature preferences. 199 women participated in a one factor (bolstering = domain specific/general) "lifestyle research survey" which, among filler questions included the test battery of questions on body shape categorization, measures for curviness, weight, height and body satisfaction, as measured previously. Following this, half the subjects completed a general affirmation task (Townsend and Sood 2012). The rest were subject to body shape specific bolstering- they were informed they would be evaluating an alleged "new Women's magazine" which among other things featured a fictitious article about a worldwide men's survey regarding preferences for female body types. The article mentioned that their specific body shape had emerged as a preferred shape among men. In the final part of the research, all completed a "product evaluation task" on the same scales as study 2, including self-referent product pairs.

Own body curvature was significant and positive ($\beta_{bc} = .2$; t = 2.43, p= .01), while the interaction between the bolstering factor and body curvature was significant and negative when bolstering was not domain-specific ($\beta = -.26$; t = -2.15, p= .03). The positive correlation between own body and preferred product curvature is reduced when body shape satisfaction is not specifically bolstered. Post bolstering body satisfaction mediated the relationship between own body curvature preference for curved products. The effect was significant and negative in the non body-specific bolstering condition (-.03; 95% CI [-.085, -.0006]; moderated mediation; Hayes 2013). When body shape satisfaction is not bolstered we see contrast in curvature preference- in other words, the use of dissociation as a coping strategy by those less satisfied with their body shapes. This contrast is not present when body satisfaction is boosted via bolstering.

This research adds to a body of work studying compensatory consumption in response to appearance-related threat (Hoegg et al 2014; Aydinoglu and Krishna 2012; see also Mandel et al 2017). It also contributes to an emerging body of work studying the relationship between products aesthetics and the self (Romero and Craig 2017; Weiss and Johar 2016), with important implications for product design.

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The Short and Long-term Effects of Ambient Scent in Olfactory-rich Servicescapes: A Longitudinal Perspective

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EXTENDED ABSTRACT

The use of ambient scents has become an increasingly distinctive trend in servicescapes (Krishna 2012). While the managerial goals of companies implementing ambient scents are very diverse, the ultimate objective is to increase their sales and customer loyalty (Goldkuhl and Styvén 2007). Moreover, ambient scent has strong implications for consumer perceptions, judgments, and product choices (Biswas and Szocs 2019). In this regard, Spence et al. Spence et al. (2014, 478) note that "understanding how and when specific scents enhance the consumer experience will be key for commercial success in the years to come."

Prior research in this domain has revealed that pleasant ambient scents have a positive influence on consumers' perceptions, of for example, the physical servicescape (Mattila and Wirtz 2001), on their brand evaluations (Morrin and Ratneshwar 2003), and time perceptions (Spangenberg, Crowley, and Henderson 1996). While past studies provide important insights into consumers' perceptions of and reactions to ambient scents, almost nothing is known about the long-term effects of consumers' repeated exposure to ambient scents in a service environment. This is because prior consumer research has, almost exclusively, relied on static experiments focused on short-term effects by examining consumers' reactions to a newly introduced olfactory stimulus. Specifically, research has not yet broached the issue of whether consumers' responses to an ambient scent wear off over time or whether they persist even after the scent has been removed.

This is critical since companies frequently implement ambient scents as a temporary promotional tool, for example, during the holiday seasons (e.g., Spangenberg, Grohmann, and Sprott 2005), or may discontinue its use for budget reasons (Spence et al. 2014).

Furthermore, those studies that examined ambient scents' short-term effects usually relied on highly controlled lab environments or classrooms (see, Rimkute, Moraes, and Ferreira 2016). As a consequence, there is need for research on ambient scent in olfactory-rich servicescapes characterized by diverse sensory cues (e.g., Mattila and Wirtz 2001), such as during train journeys when it is difficult to avoid olfactory distraction (Canniford, Riach, and Hill 2018).

Addressing these gaps in research, we first present a conceptual framework that describes the positive short-, long-term, and aftereffects of a pleasant, but nonconsciously processed, ambient scent on consumers' service perceptions. This framework mainly draws on affective priming (Li et al. 2007; Zajonc 1984) and odor-induced associative learning (Biswas and Szocs 2019). Our framework predicts enduring positive long-term effects that should persist for a while even after the ambient scent stimulus has been removed.

We then tested these predictions by examining ambient scent's effects on consumers' service perceptions in an olfactory-rich environment characterized by many sensory cues (train transportation). For this purpose, we partnered with a professional fragrance manufacturer to create two ambient scents that fit consumers' target arousal level (Berlyne 1970; Wirtz, Mattila, and Tan 2000). A between-subjects sensory lab-based prestudy (n=68) allowed selecting the appropriate scent, which mainly comprised of jasmine, melon, and violet leave essences. For all follow-up studies, we exposed the customers of a major European railway company to this ambient scent diffused via the train's air conditioning system. In a second (n=330) and third (n=64) prestudy, which we conducted in the field, we evaluated whether different intensities induced by the number of scent cartridges (between-subjects, none vs. 4 vs. 6 vs. 8 vs. 13) lead to different rates of detection and varying levels of perceived air quality as compared to an unscented control condition. Prestudy 2 showed that the implementation of 4, 6, and 8 cartridges results in collective nonconscious processing of the ambient scent stimulus (Marin, Acree, and Barnard 1988), with only 27% consumers across all three intensities noticing any special scent and no differences between scent intensities ($\chi^2(2)=1.56$, p=.458). In contrast, an increase from 4 to 8 cartridges led to a significant increase in perceived air quality (p=.010), with all scented conditions being evaluated more positively as compared to an unscented condition (largest p=.034).

An additional field prestest further showed that an implementation of 13 cartridges leads to a detection rate above the 50% threshold for collective conscious processing. Thus, we implemented 8 cartridges for our two main field studies.

The first main study (a cross-sectional field experiment, n=204) drew on a between-subjects design (scented vs unscented compartments, that were randomly selected). We collected consumer responses on their service evaluations regarding adopted multi-item construct measures for perceived Service Experience (Brady and Cronin 2001) (e.g., "I believe the railway company tries to give me a good experience today"), Service Value (Harris and Goode 2004) (e.g., "The services I purchase from the railway company are worth every penny"), and perceived Service Quality (Dabholkar, Shepherd, and Thorpe 2000) (e.g., "The rail journey is of a very high quality"). Discriminant validity was established across all studies. The results of a series of ANOVAs demonstrate positive short-term effects for all constructs (Service Experience: $F(1, 199)=8.69$, p<.001, Service Value: $F(1, 195)=14.52$, p<.001, Service Quality: $F(1, 196)=5.53$, p=.020).

To further test our conceptual framework, we ran a second field study in which we measured the reactions of customers to a pleasant ambient scent over a four-month period based on a longitudinal control group design (n=100 in scented trains and n=74 in unscented control groups). The results of construct-specific repeated measures ANOVAs show that the use of a nonconsciously processed long-term ambient scent has an enduring, positive impact on consumers' service evaluations. Furthermore, our results indicate that ambient scents' positive effect persists for at least two weeks due to post-conditioning effects after the ambient scent has been withdrawn (smallest p value between last scented study wave and a measurement two weeks after=.075). As such, this research has strong relevance for companies, suggesting that nonconsciously processed ambient scent can be a powerful tool in servicescapes.

Our results suggest that service managers can use nonconsciously processed ambient scents to enhance consumers' situational service evaluations of in terms of experience, quality, and value—not only temporarily, but over an extended period. Marketers should therefore not only rely on ambient scent diffusion's short-term commercial benefits, but also carefully consider the influence of long-term scent exposure on their consumers in the servicescape, including the effects after discontinuation.

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When Gift-Giving is Selfish: A Motivation to be Unique

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EXTENDED ABSTRACT

Perhaps the most prevalent form of prosocial consumer behavior is gift-giving. Unfortunately, however, gift-givers often err unintentionally and choose gifts that their recipients would rather not receive (Galak, Givi, and Williams 2016). We hypothesize that gift-givers also sometimes *knowingly* give gifts they do *not* believe are preferred. Specifically, we propose that gift-givers dislike giving gifts they own themselves because doing so would make their versions of those items, and thus they themselves, feel less unique. Moreover, we suggest this aversion is so strong that it even leads givers to opt for alternative gifts (that they do not own) that they believe are less-preferred.

Most of our studies follow a similar procedure: Participants are presented with two potential gifts and choose which they would give to a friend (and imagine they give it) and which of the same two gifts they would prefer to receive from that same friend (and imagine they receive it). However, the order of these choices is varied such that some participants first choose which gift they would give to their friend (and imagine this choice is realized) and then choose which of the same two gifts they would prefer to receive from their friend some time later (and imagine this choice is realized; *Give-Then-Receive*), while others do the same but with the order reversed (*Receive-Then-Give*). We predict that when making their first choice, participants will have only one consideration in mind: to choose the better of the two items for the target of the gift. That is, regardless of the target recipient of their first choice, when making this choice, participants should choose the gift that is perceived to be preferred by the gift's target (self or friend). However, when making their second choice, we predict participants will not only have this consideration in mind, but will also consider how their own sense of uniqueness will be impacted by the gift they choose. To that end, when choosing an item for the self to receive after having given an item to their friend, we predict participants will strongly focus on what the best gift for the self is, and place a lesser weight on uniqueness (i.e., on receiving an item not owned by their friend), because satisfying the latter desire would result in the self receiving a less-preferred item. However, when giving to their friend after having chosen for the self, we predict participants will strongly consider both what the best gift for their friend is *and* their desire for the self to feel unique (i.e., their desire for their friend to not have the same item as the self), because satisfying the latter desire would result in the tolerable outcome of their friend receiving a less-preferred gift. Thus, participants in this condition will be (relatively) likely to give a different gift than the one previously chosen for the self, even at the cost of their friend receiving a less-preferred gift.

In sum, we predict participants in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition will choose different gifts more frequently because they will place a stronger weight on their desire for uniqueness when making their second choice.

Study 1 served as an initial test of our asymmetry prediction. The study employed the methodology described above and the gifts under consideration were a mug with the logo of a band that the participant and their friend liked and a mug with the logo of a TV show that they both liked. As predicted, the percent of participants choosing different gifts was higher in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition (40.0% vs. 16.2%; *p* < .001).

Study 2 served to test our hypothesis that the asymmetry in study 1 arose because of an asymmetric focus on uniqueness. The procedure was like that of study 1, except that after participants made the second decision, they answered the following question about uniqueness: "When making this decision, how important was it to you that you had a different mug from your friend?" (*1 = Not at all*, *7 = Very Much*). As predicted, the percent of participants choosing different gifts was higher in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition (41.7% vs. 19.8%; *p* = .001). Also as predicted, participants in *Receive-Then-Give* (vs. *Give-Then-Receive*) condition indicated their second choice was more influenced by uniqueness (3.41 vs. 1.92; *p* < .001). A mediation analysis revealed this (uniqueness) difference was largely responsible for the asymmetry (95% CI [.86, 2.12]).

Study 3 served to demonstrate that participants in the *Receive-Then-Give* conditions of previous studies were indeed giving less-preferred gifts. The procedure was like that of study 2, except that before making the two choices, participants indicated which of the two mugs they and their friend would each like better. As in previous studies, the percent of participants choosing different gifts was higher in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition (42.1% vs. 29.7%; *p* = .114). As predicted, participants in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition were more likely to not match the second recipient's preference stated beforehand (i.e., the friend's preference in the *Receive-The-Give* condition, and the self's preference in the *Give-Then-Receive* condition; 23.7% vs. 9.5%; *p* = .019) and to choose different gifts while not matching the second recipient's preference (19.7% vs. 6.7%; *p* = .019). Participants in *Receive-Then-Give* (vs. *Give-Then-Receive*) condition also indicated their second choice was more influenced by uniqueness (3.05 vs. 2.38; *p* = .054). Mediation analyses revealed this (uniqueness) difference was largely responsible for the three asymmetries (95% CI's [.01, 1.06] / [.01, 1.02] / [.00, 1.93]).

Study 4 served to replicate our findings with consequential choices. Participants chose between two magnets for themselves and a friend to receive, with the order of these two decisions manipulated between-subjects. As predicted, the percent of participants choosing different magnets was higher in the *Receive-Then-Give* (vs. *Give-Then-Receive*) condition (48.6% vs. 20.0%; *p* = .007).

Our work adds to the gift-giving literature by documenting a novel consideration of givers and showing how it leads them to intentionally give suboptimal gifts.

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Galak, Jeff, Julian Givi, and Elanor F. Williams (2016), "Why Certain Gifts Are Great to Give But Not to Get: A Framework for Understanding Errors in Gift Giving," *Current Directions in Psychological Science*, 25 (6), 380-5.

Keeping the Joneses from Getting Ahead in the First Place:
The Influence of Envy on Gift-Giving Behavior

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EXTENDED ABSTRACT

Several papers have shown that consumers sometimes err when gift-giving (for a review, see Galak, Givi, and Williams 2016). We propose that consumers also sometimes *intentionally* give *suboptimal* gifts. Specifically, we hypothesize that gift-givers are averse to giving gifts that compare favorably to their own possessions because doing so would lead them to like their possessions less, and thus instead give alternative gifts that do not compare favorably to their possessions, even when these alternative gifts are known to be less-preferred.

To test these hypotheses, we employ several studies that follow a similar methodology: Participants imagine there are two product categories (e.g., sunglasses and headphones). Next, some imagine they own average sunglasses and great headphones, while others imagine they own great sunglasses and average headphones. Participants then choose between giving a recipient (who does not own sunglasses or headphones) above-average sunglasses or above-average headphones. In some studies, it is not made clear which gift the recipient would prefer. We predict that in these studies, participants will be less likely to give a gift when it compares favorably to something they own compared to when it does not. For example, when participants own average sunglasses (headphones) and great headphones (sunglasses), they will be less likely to give the above-average sunglasses (headphones), because doing so would lead to a lesser liking of their average sunglasses (headphones). In other studies, it is made clear that the recipient prefers one of the gifts. Here, we predict that most participants will choose the preferred gift, but that they will be less likely to do so when it compares favorably to something they own versus when it does not.

Study 1 served as an initial test our hypothesis that givers avoid gifts that compare favorably to their possessions. Participants read a vignette in which the National Holiday Federation (a fake organization) rated the Halloween and Winter decorations of every house in their neighborhood and then placed the houses into tiers ranging from tier-1 (the worst) to tier-5 (the best) for both types of decorations. Participants in the *Halloween-Level-3-Winter-Level-5* (*Halloween-Level-5-Winter-Level-3*) condition read that their house was placed into tier-3 (tier-5) for Halloween decorations and tier-5 (tier-3) for Winter decorations. The vignette then explained that new neighbors moved in across the street (and did not own any decorations) and that the participant went out shopping for a gift for these neighbors and came across Halloween and Winter decoration packages, both of which they estimated to be of tier-4 quality. Participants then chose which package they would buy for their neighbors. As predicted, fewer participants in the *Halloween-Level-3-Winter-Level-5* (33.8%) vs. *Halloween-Level-5-Winter-Level-3* (54.3%) condition gave the Halloween decorations ($p = .012$).

Study 2 served to demonstrate that givers' aversion to giving gifts that compare favorably to their possessions drives them to sometimes *knowingly* give *less-preferred* gifts. Specifically, we crossed the two conditions from study 1 with which of the two types of decorations (i.e., Halloween vs. Winter) the neighbors stated they preferred. Therefore, there were two conditions (*Envious*) in which the tier-4 package the neighbors preferred was in the category in which participants owned tier-3 decorations, and two conditions (*Not Envious*) in which the tier-4 package the neighbors preferred was in the category in which participants owned tier-5 decorations. As predicted, more participants in the *Envious* (17.2%) vs. *Not Envious* (9.7%) conditions gave the less-preferred decorations ($p = .041$).

Study 3 served to provide evidence in support of our hypothesis that the reason givers are averse to giving gifts that compare favorably to their possessions is because they believe that doing so will lead them to like their possessions less. The study was like study 1, except that, rather than choosing between the gifts, participants indicated how their liking of their tier-3 decorations would be affected if they were to choose the tier-4 package in that same category (-4 = Like much less, +4 = Like much more). As predicted, participants expected they would like their own tier-3 decorations less if they gave the tier-4 decorations in that same category (Pooled $M = -.36$, $p = .001$ in a t-test against the midpoint).

Study 4 served to replicate our findings with new gifts and to provide more evidence in support of our proposed mechanistic account. Participants read a vignette in which they were going to be taking a trip with a friend. Participants in the *San-Francisco-Level-3-Los-Angeles-Level-5* (*San-Francisco-Level-5-Los-Angeles-Level-3*) condition read that they booked a 3-star (5-star) room in San Francisco for two nights and a 5-star (3-star) room in Los Angeles for two nights, and that their friend booked 2-star rooms in the same hotels. Next, the vignette explained that the participant decided that, as a gift, they would upgrade their friend's room in one city to a 4-star room. Participants then indicated in which city they would upgrade their friend's room and how, prior to making their choice, they thought their liking of their 3-star room would be affected if they were to upgrade their friend's room in each city (-4 = Like much less, +4 = Like much more). To create a single difference score for our mediation analysis, we subtracted participants' responses to the measure about how their liking would be affected if they upgraded their friend's Los Angeles room from responses to the measure about how their liking would be affected if they upgraded their friend's San Francisco room. A lower (higher) difference score indicates a participant felt their liking of their 3-star room would be more negatively affected if they upgraded their friend's San Francisco (Los Angeles) room. As predicted, fewer participants in the *San-Francisco-Level-3-Los-Angeles-Level-5* (35.2%) vs. *San-Francisco-Level-5-Los-Angeles-Level-3* (60.9%) condition upgraded their friend's room in San Francisco ($p < .001$). The former condition also had a lower mean difference score (-.30 vs. +58; $p < .001$). A Sobel test revealed that this discrepancy mediated the aforementioned asymmetry ($p = .027$).

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Wisdom in Intergenerational Exchanges: A Qualitative Investigation Among Moroccan Grandmothers

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EXTENDED ABSTRACT

This study extends previous works on consumer wisdom (Luchs and Mick 2018) in examining how wisdom manifests in intergenerational exchanges through consumption behaviors and choices.

Consumer wisdom refers to "the pursuit of wellbeing for oneself and for others through mindful management of consumption-related choices and behaviors as realized through the integrated application of intentionality, contemplation, emotional mastery, openness, and transcendence" (Luchs and Mick 2018, 371). Each of the five facets of consumer wisdom relates to specific dimensions and traits – cognitive, affective, and behavioral characteristics and tendencies. These elements may surface and apply differently across various settings (Luchs and Mick 2018). In the marketing and consumer behavior fields, research on wisdom has focused on business managers (Mick and Lutz 2009), shoppers (Mick, Spiller and Baglioni 2012), gatekeepers in local organizations (Luchs and Mick 2018), or innovative members of e-tribes (Kozinets, Hemetsberger and Schau 2008). However, few consumer researchers have investigated how wisdom manifests in family settings and intergenerational exchanges.

Family are characterized by individual, relational or collective identities and intergenerational exchanges. Intergenerational exchanges were examined among adult children and their older parents (Karanika and Hogg 2016) and among grandmothers and their underage grandchildren (Godefroit-Winkel, Schill and Hogg 2019). However, little is known on how grandmothers' wisdom plays out in intergenerational exchanges, family life and identity building.

By capturing Moroccan grandmothers' narratives, we aim to fill such gap and investigate how consumption plays out in intergenerational exchanges and how grandmothers manifest wisdom in their mundane consumption activities with their children and grandchildren.

To grasp a deeper understanding of grandmothers' wisdom, we conducted long interviews (McCracken 1988) with 23 Moroccan grandmothers in their homes. Interviews were concluded, if not handled spontaneously, with informants' reflections on what it means to be a grandmother. Interviews ranged from 45 minutes to 2 hours.

The first author collected the data. Both authors analyzed the data first separately and then together (Sherry 2007). Iteration was made to form, revise, and develop understandings of the entire data set (Spiggle 1994). The data analysis centered on informants' reflexive thoughts about consumption experiences and their relations with their family members. After considering several theoretical frameworks, we were able to identify how wisdom emerged in grandmothers' narratives.

Our study uncovers grandmothers' remarkable knowledge about family management, and family expectations in terms of consumption.

Our study contributes to existing literature about consumer wisdom and identity in family. It extends prior research on wisdom, which accounted for interpersonal relations (Luchs and Mick 2018) in demonstrating how wisdom manifests in specific relational bundles in the family (Epp and Price 2008). Our study also suggests a new definition of grandmothers' wisdom.

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Product Popularity and Healthy Decision Making in Virtual Reality

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EXTENDED ABSTRACT

It is not uncommon for consumers to look at others when making food choices (Higgs and Thomas 2016), such as choosing lunch (Berger and Rand 2008), or doing groceries (Kuenzel and Musters 2007). The choices of others may affect one's own choices and may increase the likelihood that consumers make the same choice as others. The stimulating effect that popularity has on consumer choice has led to calls to use popularity to stimulate more healthful behaviour (Reid, Cialdini, and Aiken 2010), such as healthy food choices. Choosing healthy can be a choice between categories (e.g., salads vs. hamburgers), but also within a category. Most foods have counterparts that may be considered more healthful because they contain less salt, sugar or fat. Although such products can be considered more healthful, the deficiency of these ingredients often leads consumers to expect that these products will be less tasty (Kahkönen and Tuorila 1998)juiciness, saltiness and fattiness of \" Bologna \" . Subsequently, a sub-group of subjects (\" No information \" , N=54. Decreased levels of salt, fat or sugar may put 'light' products at a disadvantage when compared with their regular counterparts. We propose that popularity offers a reinforcement value that may diminish that disadvantage of light products.

In the current study we test the effectiveness of popularity in a supermarket environment and aim to provide insights of choices in daily situations. As such, this study calls for a high degree of realism. Participants may not always respond in a similar way when seeing hypothetical (vs. real) products (Shiv and Fedorikhin 1999). We address this issue by using virtual reality (VR) technology to create a real-life shopping experience. A realistic supermarket context was created by (1) a photo-realistic representation of a local supermarket in VR, (2) using existing products, and (3) using a general sample of supermarket shoppers.

In two pre-tests, using a sample of undergraduate students (N = 232) for the first and a sample of regular consumers (N = 199) for the second pre-test, regular products and their light counterparts were evaluated on inferences about quality, certainty about the quality, social approval, and social appropriateness. A total 40 products from ten different product categories was tested. Each product category contained two pairs with a regular and light product from the same brand. Participants evaluated one pair from each category. The results confirmed that in general, light products are indeed perceived as having lower quality than their regular counterparts (ps < .05).

The main study used a 3 group (popularity cue: none, regular product popular, light product popular) between subjects design, which was replicated across three product categories. All participants encountered one category without a popularity cue, one category in which a regular product was communicated as being popular, and one category in which a light product was communicated as being popular. Participants were asked to choose product from different product categories (chocolate milk, cheese, and hot dogs). Products were presented in a 3D virtual supermarket that was constructed out of 360° panorama images collected at a local supermarket.

The results showed a significant association between the popularity of a product and choice ($\chi^2(4)$ = 10.16, p < .05), demonstrating that popularity affected choice. Choices were further analysed via a conditional logit model with the two popularity conditions entered separately as effect-coded independent variables and category as alternative-specific effects. The analyses revealed that the popularity of light products significantly influenced participants' choices ($\beta_{light\text{-}pop\_vs\_control}$ = .186, p = .022). The predicted choice probabilities revealed that the probability that participants chose a light product was higher when these were popular (.34) compared to when no products were popular (.26) or when regular products were popular (.25). The baseline choice likelihood for light products differed across categories and was highest for cheese. The results showed no effect of popularity of the regular product ($\beta_{regular\text{-}pop\_vs\_control}$ = .050, p = .516), implying that participants were not more likely to choose a regular product when it was communicated as popular. Overall predicted choice probability for regular products was relatively high (.40). Baseline choice likelihood of regular products differed between categories, with highest choice likelihood for chocolate milk. Interactions between category and popularity were not significant (ps > .05). Summarizing, when light products were labelled as popular, light choice increased. In contrast, when regular products were labelled as popular, regular choice did not increase. This is in line with the expectation that popularity has a stronger effect for light than for regular products.

We demonstrate, in line with our expectations, that accompanying light products with popularity generally stimulates choice for those products. The popularity effect is not significant for regular products. This study offers an informational social influence perspective on the case of social influences and food choices. Previous research often focussed on the normative properties of social influence by examining social factors such as identity signalling (Berger and Rand 2008) and expectations of approval (Staunton et al., 2014). The present study extends existing knowledge by emphasizing an informative pathway, rather than the normative pathway, on a selection of products that suffer from a disadvantage on a functional level, but not on a social level. This shows the potential of popularity to increase product choice when consumers are uncertain about quality. This effect should likely generalize to all products for which quality is uncertain, regardless of whether social approval is relevant as well. The findings presented here indicate that popularity may stimulate the choice for more healthy, light products in a relevant everyday setting; doing groceries in the supermarket.

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To Choose or Not to Choose: How Time versus Money Impact Choice Deferral

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EXTENDED ABSTRACT

Time and money are two important resources that undergird our daily life. Economists tend to treat time in a similar fashion as money—both are scarce resource that people strive to attain, spend, and save (Becker, 1965). As two fundamental elements frequently considered in decision making, time and money abound in everyday marketing communications (e.g., Monga, May, & Bagchi, 2017).

Much research has attested to the psychological differences between time and money (e.g. Mogilner & Norton, 2016), despite the clichéd metaphor time is money (Lakoff & Johnson, 2008). For example, compared to money, empirical evidence shows that time evokes a more emotional rather than value-maximization mindset (Liu & Aaker, 2008), and activates a processing style which is more holistic rather than analytical (Su & Gao, 2014). Relative to the extensive use of time- and money-related concepts in advertising, our understanding is limited regarding their influences on choice deferral. In the present research, we explored whether and how increasing the saliency of time versus money concept would affect choice deferral.

Choice deferral is ubiquitous among consumers. In this regard, extensive research has identified a number of factors that may influence choice deferral, such as decisional conflict arising from the trade-off between important attributes (e.g., Tversky and Shafir 1992) and feelings of difficulty even evoked by an irrelevant source (e.g., Sela and Berger 2012). Distinct from prior work on choice deferral, we argue that activating time (vs. money) concept leads to greater choice deferral without evoking aversive feelings such as conflict or difficulty, but rather through prompting consumers to look for more information induced by the ambiguous nature of time. Consistent with our proposed mechanism, five experiments provide converging evidence that a greater need for information triggered by time (vs. money) priming mediates the effect of time (vs. money) on choice deferral.

Study 1 was designed to provide initial demonstration of the proposed effect. 137 participants were recruited from MTurk. They were randomly assigned to one of the two conditions (priming: time vs. money). All participants were informed that they would complete several unrelated tasks in the survey. First, the first task involved unscrambling sentences, which we adapted from prior literature to prime participants with either time or money-related concepts (Gino & Mogilner, 2014). After the priming task, participants were presented with a choice deferral task, in which they were asked to make a car-purchase decision. As in real choice situations, they were also given the opportunity to look for other options. Results showed that more participants decided to choose later in the time condition (29.9%) than in the money condition (14.3%, $\chi2$ (1) = 4.85, p = .028).

Study 2 was a replication of Study 1 with one modification—an alternative account that money prime might drive consumers to take an action was tested. The same priming manipulation was used as in Study 1, followed by an apartment-renting decision. Finally, participants completed the action-orientation measure we adopted from Jiang et al. (2008). Consistent with Study 1a, participants were more likely to defer their decisions when primed with time (vs. money) concepts ($\chi2$ (1) = 6.91, p = .009). More importantly, the two conditions did not differ in terms of action-orientation (t < 1).

In Study 3, we aimed to examine whether time increases or money decreases choice deferral as compared to a neutral condition.

Thus, we included a control condition, in which participants were only presented with neutral words in the priming task. Distinct from the first two studies, a word puzzle task was used as a manipulation. Results revealed that more participants chose the deferral option in the time condition (29.7%) than in the other two conditions, while no reliable differences were observed between the money (7.9%) and the control conditions (10.5%).

The major goal of Study 4 was to provide further evidence about the underlying mechanism of the proposed effect. Moreover, we used a series of choice sets instead of a single decision context to better test the effect. Similar to earlier studies, the sentence-unscrambling task was used to prime time or money. We adapted the choice deferral task from Coleman et al. (2017). Specifically, participants were presented with a series of six choice sets in a random order, each involving a different type of product. After the deferral task, participants indicated their need for more information on two 9-point scales (1 = not at all, 9 = very much). We counted the total number of times participants chose to deferral and found that time prime leads to greater deferral (M = 2.73, SD = 2.33) than did money prime (M = 1.88, SD = 2.08). More importantly, a bootstrapping analysis revealed that participants were more likely to look for more information when primed with time than with money, which in turn resulted in greater choice deferral (95% CI: .0896 to .7219).

In Study 5 we created an ecologically more realistic manipulation of the concept saliency that demonstrates the potential practical implications of our findings. Specifically, we manipulated the activation of the focal concept by varying the background images of the creativity task. For participants in the money prime condition, there were several stacks of cash and a poster of a piggy bank in the background picture, whereas for the participants in the time prime condition, the stacks of cash and the piggy bank poster were replaced by a clock and an hourglass poster, respectively. A decision involving purchasing a laptop was used to measure choice deferral. Identical to all previous studies, we found more participants would like to defer their decisions in the time condition (43.4%) than in the money condition (26.0%, $\chi2$ (1) = 6.85, p = .009).

In sum, across five studies we consistently observed that time reminders lead consumers to look for more information when making decisions, thus increasing their tendency to defer to choose. This finding has important marketing implications, such that consumer purchase decision will be thwarted when time-related concepts are highlighted.

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Proud to Limit the Damage: Negatively Framed Eco-Ratings Motivate Green Intentions Through Anticipated Pride

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EXTENDED ABSTRACT

Consumers are becoming more willing to make ecological purchases and expect to find environmentally sustainable products on offer (Newman et al., 2014; Van Doorn & Verhoef, 2015). However, assessing the degree of environmental sustainability of different purchase options is challenging and consumers mostly have to rely on various eco-information schemes. One type of eco-information scheme that is particularly appreciated by consumers are eco-ratings (Finnerty et al. 2011). Eco-ratings quantify the environmental (un)sustainability of products in a choice set in a standardized way, using a predefined score range (e.g., http://www.eco-rating.co.uk/).

Apart from some exceptions (Uyttendaele et al., 2016), eco-rating schemes tend to be positively framed: scores express the extent to which an option is more or less ecological (vs. more or less damaging to the environment). However, there is no inherent reason why eco-ratings need to be positively framed. Though some manufacturers and retailers might prefer positive framing to signal the benefits of their products and to position themselves as green, negatively framed eco-ratings (e.g., 1 = very damaging to 5 = not damaging for the environment) may offer advantages, especially for stakeholders who aim to promote environmentally sustainable consumer behavior (e.g., governmental bodies). Emphasizing the negative aspects of consumption is also in line with how environmental campaigns are usually designed, inducing negative emotions such as guilt to elicit preventive or reparative action (Lu & Schuldt, 2015; Rees et al., 2015).

The current research tests the hypothesis that negatively (vs. positively) framing eco-ratings increases the likelihood that consumers will opt for the most ecological option in a choice set. Since in practice most current eco-rating schemes use positive framing, this insight has practical relevance. As our main theoretical contribution, we focus on pride and guilt (Antonetti & Maklan, 2014) and demonstrate, as an underlying psychological process, that the effect of products' eco-ratings on consumers' anticipated pride (vs. guilt) is stronger when eco-ratings are negatively (vs. positively) framed and that because of this, eco-ratings have a stronger influence on buying intentions when they are negatively framed.

In study 1, we manipulate eco-rating framing (negative vs. positive) for two different product assortments and test the effect of framing on the choice likelihood of the most ecological option in the assortment. In study 2a, we use a mixed between-/within-subject experiment in which we manipulate eco-rating framing (negative vs. positive) between-subjects and each participant responds to multiple product profiles varying in price and eco-ratings (conjoint design). For each product profile we measure anticipated pride vs. guilt on a bipolar scale and assess buying intention. In study 2b we add a between-subjects manipulation of the scoring direction of eco ratings and measure anticipated pride and guilt with two separate items.

Study 1

We first test whether negatively framed eco-ratings increase the likelihood that the most environmentally sustainable option will be selected from a product assortment.

Method

Members of an online market research consumer panel (N = 201, 48.9% male, M_{age} = 46.35, SD = 15.94) viewed a shopping list (washing liquid, baby shampoo) and an instruction to enter a mock online store and choose the stated items from an assortment. The products were all described on eco-rating (positively or negatively framed), price and fragrance as a filler attribute. Product profiles contained a small pack shot picture. Participants were randomly assigned to either the positive framing condition, in which the scale ranged from 'not environmentally friendly' to 'very environmentally friendly', or the negative framing condition in which the scale ranged from 'very environmentally damaging' to 'not environmentally damaging' (See Figure 1). The next page displayed the two assortments (presentation order was randomized), each consisting of six products (described on the aforementioned attributes) and respondents were asked to choose one product in each product category.

Results and discussion

In the negatively (positively) framed condition, 42.3% (27.8%) and 21.2% (10.3%) of the participants selected the most ecological baby shampoo and washing liquid, respectively (both p < .05). The findings of study 1 support the hypothesis that negative framing may be effective in encouraging consumers to make more ecological product choices. In study 2a, we use a rating-based conjoint study to investigate the effect of eco-ratings on purchase intentions in more detail, by examining whether the effect is mediated by anticipated pride vs. guilt and whether the effect of eco-ratings on anticipated pride vs. guilt is stronger when eco-ratings are negatively framed.

Study 2a

Method

Students at a large American University (N = 267, M_{age} = 19.5, SD = .68; 36.3% women) participated in a 2 (eco-rating framing: negative vs. positive; between-subjects) by 3 (eco-rating level: low, medium, and high; within-subject) by 3 (price level: low, medium, high; within-subject) mixed experimental design. The price manipulation served to avoid confounding of price and eco-rating and to reduce research goal transparency. Participants viewed nine fictitious washing liquids. Each stimulus consisted of a pack shot picture with a description of the form "Laundry liquid 50 washes (3.2L) with [randomly assigned] fragrance priced at [$7.99 / $9.99 / $11.99]" and a graphic eco-rating with a score of 1, 3 or 5 out of 5. Respondents rated each stimulus on two seven-point bipolar rating scales assessing anticipated pride versus guilt ("I would feel guilty - proud buying this product") and buying intention (anchored by "I would definitely not buy this product" and "I would buy this product"). Eco-rating framing was experimentally manipulated between subjects by altering the labels of the eco-rating. In the negative framing condition, 1 = 'very damaging for the environment' and 5 = 'not damaging for the environment'; in the positive framing condition, 1 = 'not environmentally friendly' and 5 = 'very environmentally friendly'.

Results and discussion

The current data have a specific multilevel structure, with a within-subject manipulation of eco-rating and price, and a between-

subjects manipulation of negative vs. positive framing of the eco-ratings. At the within-subject level (level 1), eco-rating and price are orthogonally manipulated across nine product profiles. Participants rate each of these nine profiles in terms of anticipated pride (vs. guilt) and purchase intention. The intra-class correlations for anticipated pride and purchase intention are ICC = .046 and ICC = .093, respectively, so multilevel modeling is required. For each person one can regress anticipated pride on eco-rating and price, and intention on eco-rating, price, and anticipated pride. These relations form a path model with purchase intention as the dependent and anticipated pride as the mediating variable (see Figure 2). Eco-rating is included as the independent variable, and price is included as a control variable. For the analysis, eco-rating levels and price are coded as -1 (low), 0 (medium), and 1 (high). Eco-rating framing was experimentally manipulated between-subjects, and negative eco-rating framing is represented by a dummy variable (0 = positive framing, 1 = negative framing) at level 2, as shown in the upper panel of Figure 2.

In our model (preliminary tests favored a linear model with random intercepts and random regression coefficients), the intercept terms of pride and intention, and the regression coefficients relating intention to pride, and pride and intention to eco-rating and price (see lower panel of Figure 2, showing the level 1 relations), are regressed on the negative framing dummy variable (see upper panel in Figure 2, showing the level 2 relations). Conceptually, the level-2 model tests whether the level-1 coefficients are moderated by the framing manipulation. Table 1 reports the mean regression coefficients in the positively vs. negatively framed eco-ratings conditions. The columns under 'Difference' report the difference in mean estimates between the two conditions and the associated confidence interval.

Eco-rating has a positive effect on anticipated pride, and anticipated pride is positively related to intention. After accounting for anticipated pride, eco-rating still has a significant residual (direct) effect on intention in the negative framing condition, but not in the positive framing condition. In both conditions, the indirect (mediated) effect of eco-rating on intention is significantly positive.

The column labeled 'Difference' in Table 1 reports the difference in parameter estimates between the positive vs. negative framing conditions. The mean regression coefficient from eco-rating to anticipated pride is 1.545 in the positive, and 1.957 in the negative framing condition (p < .05). Thus, negative framing of eco-ratings strengthens the effect of eco-ratings on anticipated pride. The effect of pride on intention does not vary by framing condition, and even though the effect of eco-rating on pride is significantly stronger in the negative framing condition and the indirect effect of eco-rating on intention via pride is directionally larger in the negative framing condition, the two indirect effects do not differ significantly across the framing conditions. However, the total effect of eco-rating on intention is significantly stronger in the negative framing condition, relative to the positive framing condition, which is partly due to the significant direct effect of eco-rating on intention in the negative framing condition. To sum up, eco-ratings positively affect anticipated pride, and ultimately intention. When eco-ratings are negatively framed, their impact on anticipated pride is significantly stronger. This also results in a stronger total effect of eco-rating on intention in the negative framing condition.

Study 2b

Method

MTurkers (N = 191; 44.5% women; M_{age} = 32.1, SD = 13.2) participated in a similar research design as in Study 2a, but with two extensions. First, we counterbalanced eco-rating scoring direction: a higher score can indicate higher vs. lower environmental sustain-

ability. Second, we used separate measures of anticipated guilt and pride. We measured anticipated pride ('I would feel proud buying this product'), anticipated guilt ('I would feel guilty buying this product') and buying intention ('I would consider buying this product') using seven-point dropdown scales ranging from 'extremely likely' to, 'extremely unlikely'. Thus, we used a 2 (eco-rating framing: negative vs. positive; between-subjects) by 2 (scoring direction of eco-ratings: higher is more environmentally sustainable vs. lower is more environmentally sustainable; between-subjects) by 3 (eco-rating level: low, medium, high; within-subject) by 3 (price level: low, medium, high; within-subject) mixed experimental design. Participants rated nine fictitious washing liquids (same materials as Study 2a).

Results

Preliminary tests again favored a linear model with random intercepts and random regression coefficients. We start with a multilevel path model in which, at level 1, intention is regressed on anticipated pride, anticipated guilt, eco-rating and price. Closer inspection of the results showed that the mean regression coefficients from price to anticipated pride and from price to anticipated guilt were not significantly different from zero. For parsimony, these parameters were dropped from the model (including these parameters did not substantively alter the results). Next, we introduce the experimental between-subjects (level 2) variables, eco-rating framing (0 = positive framing vs. 1 = negative framing) and reversed eco-rating scoring direction (0 = higher is more environmentally sustainable vs. 1 = lower is more environmentally sustainable). Preliminary analyses showed that scoring direction did not affect any of the level 1 variables (or random parameters), and did not interact with eco-rating framing (all p's > .30). For reasons of parsimony, we dropped this variable from the model.

To test our hypotheses, we estimate the model shown in Figure 3 (model estimates in Table 2). All mean regression coefficients are statistically significant. Price negatively affects buying intention. On average, eco-rating has a significant positive effect on pride and a significant negative effect on guilt. Negative framing significantly moderates the former but not the latter effect (see column 'Difference'). Specifically, when eco-ratings are negatively vs. positively framed, the effect of eco-rating on anticipated pride is significantly more positive. For anticipated guilt, no such moderation is evident.

Downstream, anticipated pride and anticipated guilt are significantly and positively related to intention. Furthermore, the indirect effects of eco-rating on intention via pride and guilt are significant in both framing conditions, and the magnitude of the indirect effect via anticipated pride is significantly stronger when eco-ratings are negatively framed. In addition, eco-rating has a direct (i.e., unmediated) effect on intention after controlling for pride and guilt (in both framing conditions). Finally, the total effect of eco-rating on intention is significant in both framing conditions, but the total effect is significantly stronger when eco-ratings are negatively framed.

General discussion

As hypothesized, negative framing of eco-ratings strengthens the relation between products' eco-ratings and consumers' intention to buy them, and makes it more likely that consumers will select the most ecological option from a choice set (Study 1). The results of studies 2a and 2b demonstrate that eco-ratings positively affect anticipated pride, which in turn has a positive effect on purchase intention, and that the effect of eco-ratings on pride is stronger when eco-ratings are negatively framed. In other words, emphasizing that a product is less damaging to the environment, rather than more environmentally friendly, relative to other products, increases the an-

ticipation of pride and leads to stronger intentions to buy more environmentally sustainable products. These results are in line with the literature on the negativity bias, which states that negative information is assigned more weight than positive information (Baumeister et al., 2001), but they also extend prior findings by demonstrating a stronger relation between negatively framed information and anticipated pride in particular.

The current research focused on eco-ratings, as these can presumably be a viable communication tool to inform consumers about the relative environmental sustainability of products in an assortment (Finnerty et al., 2011). As for implications, the advantages of negative vs. positive framing largely depend on the goals pursued by different stakeholders. Manufacturers producing products with high environmental sustainability scores will probably benefit when a negative frame is used, while those producing products at the lower end of the environmental sustainability scale will prefer positively framed eco-ratings to avoid negative associations. Governments typically want to emphasize the environmental (un)sustainability of products and to encourage consumers to choose the most environmentally sustainable products from an assortment. In this case, negatively framed eco-ratings appear most effective. While retailers probably also adhere to this goal, there are potential drawbacks to this approach. Specifically, some segments of consumers may not regularly buy ecological products (e.g., if these products are more expensive). For these consumers, the use of negatively framed eco-ratings may induce increased levels of guilt, which in the longer run may demotivate them from frequenting stores that use such eco-ratings. On the other hand, consumers who do buy ecologically may experience a motivational boost and increase their patronage. Future research should further explore the long-term consequences of feelings of pride and guilt.

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Approval and Accomplice: Towards a Better Understanding of Brands in Subcultures

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EXTENDED ABSTRACT

"Dirty Sprite" is a nickname for a drink that combines Sprite soda, prescription-strength cough syrup, and sometimes Jolly Ranchers candy (Young 2017). Over many years, this mixture has been an established recipe within a consumer subculture that revolves around the recreational drinking of codeine infused cough syrup, often referred to as "lean" (Golub, Elliott, and Brownstein 2013). While the consumption of "lean" raises extreme public health concerns (Hou et al. 2011), the inclusion of Sprite within this subculture also presents an unintended association for the brand. The role of brands within subcultures have been studied, but research has primarily focused on collectives where the brand is the central reason for group formation (Quester, Beverland, and Farrelly 2006; Schembri 2009). Sprite's inclusion in the consumption of lean presents an intriguing example of a non-brand centric subculture. This research seeks to address why Sprite is adopted as a part of the lean subculture, and to gain a better overall understanding of the various roles a brand can play within a non-brand centric consumption community.

The relationship and roles of brands in consumption communities has been studied extensively in the marketing literature (Thomas, Price, and Schau 2013). In brand communities, a brand can serve as a signal of community membership and exclusivity, which can also lead to the disparagement and rejection of competing brands (Muñiz and Hamer 2001; Muñiz and O'Guinn 2001; Relling et al. 2016). Members of brand communities also practice specific rituals and traditions surrounding brand usage (McAlexander, Schouten, and Koenning 2002). Subcultures of consumption can also be formed around a shared commitment to a particular brand (Schouten and McAlexander 1995). These groups differ from brand communities because they may create meanings in opposition, rejection, or indifference to the accepted meanings of majority society (Schwarzenberger and Hyde 2013). Within such subcultures, brands have been shown to be a source of ethos (Schembri 2009), to signal group membership, and to represent authenticity (Leigh, Peters, and Shelton 2006). But subcultures can also be based around a common lifestyle or consumption activity (Arthur 2006; Beverland, Farrelly, and Quester 2010).

The consumption of lean represents such an activity based subculture, but has potentially dangerous consequences. Participating in consumption can cause an individual to "lean" over, and can result in slow, slurred speech, slowed heart rate, seizures, or potentially even death (Agnich et al. 2013). Lean in its original form started in Houston, Texas in the 1960s, when artists would consume beer with cough syrup as a ritual and staple at social gatherings (Elwood 2001). Over time, various wine and spirits, and eventually Sprite would be used as complements in the mixture.

This current study of the lean subculture follows an observational netnography (Kozinets 2002; Brown, Kozinets, and Sherry 2003) methodology. An in-depth immersion into five online forums where past and current users of lean share their experiences, is used to investigate why Sprite was adopted as a part of this subcultural ritual. The study relies on textual data as well as images in the forums to help discover the patterns of meaning for Sprite within the subculture. Additionally, to provide a benchmark for discovering unique meanings within the consumer forums, analysis is conducted with Sprite's own marketing communications. In total the dataset includes: 765 consumer forum posts, 10 press releases, 15 commercials, and 81 Facebook posts.

A thematic analysis reveals four major themes related to the roles that Sprite serves within the subculture. First is Sprite's perception as an accessory to cough syrup in the subculture, not as the primary ingredient. Second is its presence as a signal of authenticity and authority. This authenticity is established through users reflecting that lean is not "real" or "authentic" unless it includes Sprite, and through the establishment of authority based on region and experience. Many users even refer to Sprite as a part of the "original" formula, seemingly ignoring the historical role of alcoholic beverages in this mixture. The third theme is the brand's accessibility through various retailers and in the minds of consumers. This accommodates for the difficulty in accessing more subversive mixture ingredients, with many forum participants sharing ways to access the most potent forms of cough syrups without having a legal prescription. The fourth theme is the use of Sprite to add flavor and cover up the harsh taste of the cough syrup, which comes as a result of Sprite's ingredients and carbonation.

Ultimately, these findings reveal that while brands can be used for social approval or acceptance, serving as a symbol of authenticity and authority within a subculture, they can concurrently be used as an accomplice, by acting as a masking agent to cover up subversive subcultural elements that may not be as socially appealing. In the case of the lean subculture, Sprite covers for the inaccessibility of prescription-strength cough syrup and alcohol, and for the harsh taste of codeine-infused cough syrup. The discovery of these roles particularly provide depth to expand knowledge regarding brands in non-brand centric subcultures. And although the lean subculture has been examined from a public health perspective, the marketing and consumer perspective from this research is unique. The findings not only enhance consumer culture theory but also help improve managerial understanding of subcultural brand adoption. Gaining insight into the subcultural use of brands, can certainly better inform firm decision making in confronting circumstances of uninvited brand meanings.

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Why We Don't Rent What Others Love: The Role of Product Attachment in Sustainable Consumption

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EXTENDED ABSTRACT

When listing a possession for rent on a consumer-to-consumer platform, owners typically write a brief product description. Such descriptions often include attachment cues—indications that the owner is emotionally attached to the product. How does knowing that an owner is sharing a cherished possession impact a renter's intention to access that possession? Whereas prior literature investigates how product attachment influences the decisions of owners, our research complements this stream by showing that an owner's emotional attachment to a product can also influence the decisions of others involved in a transaction.

In contrast to owners' expectations that product descriptions including attachment cues will increase interest in renting, our core proposition is that attachment cues may instead decrease interest in renting. We further predict that renters' interest in a product will be a function of the strength of the attachment cue, such that intentions to rent the product will decrease more in the presence of cues that convey stronger (vs. weaker) attachment. The rationale for these predictions is that renters will desire to avoid the unwanted responsibility of protecting an item that is so special to its owner.

In a pilot study, we asked 97 participants to take the perspective of owners and, for four different products, choose which of two product descriptions—one with an attachment cue and one without—they would select to convince people to rent the product. We find that descriptions which included an attachment cue were consistently preferred.

In study 1, we examined C2C transactions across five different product categories. Participants were 891 U.S. participants (66.5% female, M_{age} = 38.01 years) recruited on Amazon Mechanical Turk (AMT) and randomly assigned to one of ten conditions in a 2 (Attachment Cue: Absent vs. Present) x 5 (Product Category: Car, Tent, Board Game, Snorkeling Gear, or Tennis Racquet) between-participants design. Within their assigned product category, each participant viewed informative descriptions of two similar products on a product sharing website (a target product and a control product) with an attachment cue present or absent and then made a choice. As predicted based on our theorizing, the presence (vs. absence) of an attachment cue significantly decreased choice share of the target product. Across product categories, the choice share of the target (vs. control) product was 71.8% (451/891) in the Attachment Cue Absent condition, but dropped to only 44.1% (440/891) in the Attachment Cue Present condition; $\chi^2(1)$ = 70.47, p < .001.

Study 2 aimed to more directly test the mechanism by which attachment cues decrease intentions to rent. Participants were 274 U.S. participants (65.0% female, M_{age} = 39.33 years) recruited on AMT and randomly assigned to one condition in a three-cell (Cue: Strong Attachment vs. Weak Attachment vs. Control) between-participants design where participant were to examine a bike on a product sharing website. As our primary dependent variable, we measured intention to rent the bike by asking participants, "how likely would you be to rent this bike (rather than the similar bike you found for the same rental fee)?" on a sliding scale (0 = Not at all likely to 100 = Extremely likely). To test whether responsibility avoidance mediates the impact of attachment cues on intention to rent, we used a composite measure of responsibility avoidance consisting of four items (α = .88), measured on a sliding scale from 0 = Completely disagree to 100 = Completely agree. Consistent with our hypotheses, intentions to rent differed significantly across conditions; $F(2, 271)$ = 6.821; p < .001; np2 = .048. A mediation analysis (Preacher and Hayes 2008, Model 4) showed that the effect of an attachment cue on intention to rent was mediated by responsibility avoidance (95% CI = [-7.74; -3.42]).

Study 3 aimed to test our prediction that by reducing responsibility avoidance, an above-market rental fee will attenuate the impact of an attachment cue on intentions to rent. Participants were 388 U.S. participants (60.6% female, M_{age} = 37.18 years) recruited on AMT and randomly assigned to one of four conditions in a 2 (Attachment Cue: Absent vs. Present) x 2 (Price: At-Market vs. Above-Market) between-participants design. Using a bike sharing scenario similar to study 2, participants were asked to choose between an at-market (versus above-market) bike, while attachment was manipulated by providing half of the participants with additional details shared by the owner. As our primary dependent variable, we measured renters' intentions to rent the product. We found a significant interaction effect between attachment cue and price on intentions to rent, $F(1, 384)$ = 24.04; p < .001, np2 = .059, in which the presence (vs. absence) of an attachment cue decreased intentions to rent when the product was priced at-market (M = 32.05; SD = 30.22, N = 96 vs. M = 65.91; SD = 25.18, N = 88); $F(1, 182)$ = 67.49; p < .001, np2 = .271.

Together, our findings add to the consumer psychology literature by offering a more comprehensive view of the consequences of product attachment. Prior research has examined how owners' emotional attachment to a product influences their own decisions, such as the minimum price they are willing to accept to sell the product in a secondary market place (Ariely, Huber, and Wertenbroch 2005; Brough and Isaac 2012). In contrast, we examine how awareness of an owner's emotional attachment to a product influences the decisions of others—specifically, users who could potentially rent the product in a sharing economy marketplace.

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Goal Pursuit Recommendations and Self-Conscious Emotions:
Why and When the Form of Recommendation Affects Closeness and Motivation

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EXTENDED ABSTRACT

While the majority of consumers claim they will do "anything" to be healthier, research finds that only about 3% of Americans fulfill the basic requirements of a "healthy lifestyle" (Beck 2016). Thus, there has been much interest from both consumers and marketers in identifying new strategies for improving consumers' physical well-being, especially in terms of promoting healthier eating and more exercise (e.g., implementation intentions, fitness trackers, and nudges; Baskin et al. 2016; Etkin 2016; Gollwitzer 1999). Despite the broad nature of research that has examined ways of recommending consumers to engage in healthier lifestyles, this research has been highly intrapersonal. Recently, however, there has been growing interest in the interpersonal nature of goal pursuit.

Prior theory suggests that engaging in behaviors aimed at facilitating others' goal pursuits promotes greater interpersonal closeness (Fitzsimons, Finkel, and Vandellen 2015; Fitzsimons and Fishbach 2010; Fitzsimons and Shah 2008; Huang et al. 2015). We bridge this literature with the self-conscious emotions literature (Leary 2007; Tangney 1999) to examine how the form of a health product recommendation has differing consequences. In particular, we investigate how "traditional health product recommendations" (when consumers recommend a health product to others without mentioning an intention to also try it themselves) and "concurrent health product recommendations" (when consumers recommend a health product to others while mentioning their intention to also try it themselves) differentially affect interpersonal closeness and motivation. We theorize that concurrent recommendations increase both interpersonal closeness and goal motivation compared to traditional recommendations (and also compared to a no-recommendation control condition). Importantly, by incorporating the literature on self-conscious emotions, we further propose that concurrent (vs. traditional) recommendations foster greater closeness because they reduce self-conscious feelings associated with receiving health recommendations and identify boundary conditions for when the benefits of concurrent (vs. traditional) recommendations arise. These findings offer theoretical implications for understanding goal pursuit in a social context and practical implications for how consumers and marketers may better promote consumer welfare using interpersonal word-of-mouth for health products.

We present eight studies that test our hypotheses. Studies 1A and 1B demonstrate the basic effect of traditional versus concurrent recommendations across two different self-regulatory goal contexts (1A: healthy eating goal, 1B: savings goal) and two different recommenders (1A: strangers paired in the lab, 1B: real friends), demonstrating generalizability and robustness of the basic effect. Study 2 replicates this effect in a different self-regulatory context (exercise goal) and tests the proposed psychological process for why concurrent recommendations increase closeness and motivation (i.e., via lower embarrassment). Studies 3A and 3B then further test for the robustness of the proposed psychological process via lowered self-conscious feelings. Studies 3A and 3B also add additional insight into the effect, either by comparing both types of recommendations (traditional and concurrent) to a control condition in which no recommendation is provided (3A) or by generalizing the basic effect to a marketing as opposed to a conversational context, thereby address-

ing a limitation of the prior studies (3B). Study 4 generalizes across both goal-directed and non goal-directed conversational contexts with a friend. Studies 5 and 6 then test boundary conditions consistent with the proposed process. In study 5, we explore a theoretically relevant boundary condition consisting of individual differences in trait self-consciousness. In study 6, we explore a practical boundary condition: a goal pursuit recommendation in the context of a gift.

In sum, by bridging theory on interpersonal goals with the self-conscious emotions literature, we demonstrated that receiving a concurrent (vs. traditional) recommendation for a health-goal related product increases closeness and motivation. Moreover, supporting the role of self-conscious emotions, we showed that this effect was mediated by lower self-conscious emotions (i.e., embarrassment) produced by concurrent recommendations. Finally, we identified boundary conditions consistent with this process: the benefit of receiving concurrent (vs. traditional) recommendations emerges among consumers high in trait self-consciousness but not those low in trait self-consciousness; and these benefits occur when consumers hold their goals privately but not when they publicly communicate them. This last finding is of interest both theoretically, as it demonstrates further support for our proposed process, but also practically, as those who privately hold their goals might ironically be most in need of goal support and motivation (Brown 1978; Dyer 1978).

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Made in God's Image: How God Salience Affects the Desire for Self-Improvement Products

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EXTENDED ABSTRACT

The self-help industry is tailored specifically towards helping consumers improve themselves through an abundance of products ranging from books and apps. Formally, the desire underlying consumers' interest in self-improvement products has been conceptualized as the motivation to pursue outcomes that will facilitate bettering the self in some way (Allard and White 2015). It typically emerges in the context of personal attributes and/or performance in domains that are self-relevant and important—for instance, intellectual, moral, social or physical aspects of the self (Allard and White 2015). In our work, we build on the prior literature on self-improvement (e.g., Goldsmith, Tezer and Roux 2017) to examine a novel determinant of self-improvement. Specifically, we explore how the salience of God can alter consumers' interest in self-improvement products. In thinking about how God salience might affect consumers' interest in self-improvement products, we draw on research (e.g., Sedikides and Gebauer 2010) to predict that reminders of God will decrease consumers' interest in self-improvement products. We present eight experiments thus far.

In Study 1A, participants were randomly assigned to a task that either made God salient (i.e., writing about the role of God in their lives) or not (i.e., writing about their day), and then evaluated a self-improvement fitness app. Participants indicated their interest in the app, and we found that participants where God was highly (vs. lowly) salient had lower interest (p=.025). In Study 1B, we replicated the findings of Study 1A using a real choice scenario and different products (i.e., two types of teas; self-improvement vs. control).

In Study 2A, participants were randomly assigned in a 2 (God salience: high, low) x 2 (product: self-improvement, control) between-subjects design. The salience manipulation was the writing task from Study 1A and the teas were from Study 1B. Afterwards, participants answered our gratitude with core traits scale. We found a significant interaction (p=.005). Specifically, the simple effect of God salience on purchase intentions was negative for the self-improvement tea (p<.001). The simple effect of God salience was not significant for the control tea (p=.77). We also found a significant index of moderated mediation (CI$_{95}$[-.15,-.003]) where the conditional indirect effects analysis was significant for the self-improvement tea (CI$_{95}$[-.13,-.007]), but not for the control tea (CI$_{95}$[-.04,.06]) through gratitude. In Study 2B, using the same study design as in Study 2A, we replicate these findings using different products and show that only gratitude mediates our effect compared to possible alternative explanations (e.g., perceptions of the brand being commercialized or materialistic).

In Study 3, we show that our effect is unique to God salience (vs. other supportive figures). Participants were randomly assigned in a between-subjects design (salience: God, parent, neutral). Participants wrote about God, their day, or about one of their parents. Afterwards, participants engaged in an incentive compatible tea choice similar to Study 1B, where they could win the tea they chose. We found that the effect of God salience on choice was significant (p=.021) where the choice of the self-improvement tea was lowest for those for whom God was salient. The choice of the self-improvement tea did not differ between the parent and neutral conditions (p=.44).

In Study 4, we find that our effect is mitigated when God is seen as encouraging self-improvement. Participants were randomly assigned in a 3(salience: God salience: high-baseline, high-encourages improvement, low) x 2(product: self-improvement, control) between-subjects design. Participants wrote about the role of God in their life, their day, or about a time they believed God was commanding them to improve. Participants indicated interest in sleep-sheets that were framed as self-improving or neutral. We found a significant interaction (p=.034), where pairwise comparisons revealed that participants for whom a high-baseline God was salient, had lower purchase interest for the self-improvement (vs. control) sheets (p=.028). This contrast was not significant for those for whom a high-encourages improvement God was salient (p=.155), or those in the low salience condition (p=.001).

In Study 5, we determine that God salience only impacts purchase interest for products framed for individual self-improvement (vs. spiritual or others). Participants were randomly assigned in a 2(God salience: high, low) x 3(product: individual self-improvement, self-improvement for others, spiritual self-improvement) between-subjects design. Participants engaged in a writing task to induce salience, and then saw products framed as different self-improvement types. We did not find a significant interaction (p=.29). However, our core prediction was about high (vs. low) God salience on interest in each product category, therefore, we examined the pairwise comparisons across the different products. When God salience was high (vs. low), participants had lower purchase for the individual self-improvement product (p=.03). This contrast was not significant for the spiritual self-improvement (p=.93), or the other-focused self-improvement product (p=.35).

In Study 6, we show that our effect only occurs when God is seen as benevolent (vs. authoritarian). Participants were randomly assigned to one condition (God salience: God as benevolent, God as authoritarian, low). Participants thought of a benevolent God, authoritarian God, or were in a neutral condition. Afterwards, participants engaged in the incentive compatible task of Study 3 and answered the gratitude in core trait items. We found that the effect of benevolent God salience on choice was significant (p=.025) wherein the choice of the self-improvement tea was lower when a benevolent God was salient (vs. an authoritarian God; p=.025 and vs. low salience; p=.036). Choice of the self-improvement tea did not differ between the authoritarian God and the low salience conditions (p=.90). Mediation showed that the indirect effect of God salience on choice was significant (CI$_{95}$[-.36, -.04]) when comparing benevolent God to low God salience. This was not significant when comparing authoritarian God to low God salience (CI$_{95}$[-.02, .07]).

To summarize thus far, we find that when God is salient, consumers display lower interest in self-improvement products relative to when God is not salient. Eight studies address alternate explanations for our results, boundary conditions, and trace this effect to the fact that when God is salient, consumers feel more gratitude for their core traits.

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To Build or to Acquire a Socially Responsible Brand?

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EXTENDED ABSTRACT

Given the trend toward sustainable consumption (Mirvis 2008), acquisitions of socially responsible brands provide firms with instant access to a growing market and a way to signal social responsibility, allowing firms to benefit from favorable consumer responses (Sen, Bhattacharya, and Korschun 2006).

This paper examines whether firms can indeed "buy" CSR perceptions by acquiring socially responsible brands. We therefore investigate consumer reactions to acquisitions of socially responsible brands (Studies 1 and 2), whether they differ from reactions to brand development (Study 3) and the process that drives this effect (Study 4).

Although social responsibility initiatives are implemented at the corporate or brand level (Grohmann and Bodur 2015), spillover effects occur across these levels (Wang and Korschun 2015). Consequently, we predict that spillover effects from the acquisition of socially responsible brands manifest in enhanced corporate social responsibility (CSR) perceptions of the acquiring firm. The degree of positive spillover may depend on the symbolic/functional nature of the acquired brand, however: Consumers are more likely to be attuned to events that weaken a symbolic (vs. functional) brand's signalling power. Thus, an acquisition by a firm that is not associated with social responsibility reduces the brand's symbolic social responsibility value and should attenuate spillover effects. We therefore predict that spillover effects from the acquired socially responsible brand to the acquiring firm will be weaker for symbolic (vs. functional) brands.

In this context, a relevant question is whether the acquisition of a socially responsible brand is preferable to new brand development. Building a socially responsible brand is time consuming and costly (Mirvis 2008), and the acquisition of an existing, socially responsible brand is an attractive alternative. An acquisition has the potential of weakening the acquired socially responsible brand's identity because it implies discontinuity and dilution of brand social responsibility associations due to new and weaker social responsibility associations connected to the acquiring firm. In a brand development context, however, dilution is not a concern, given no prior identity. We therefore predict that, for symbolic brands, firms are more likely to increase consumers' CSR perceptions through brand development (vs. acquisition). Because functional brands are not expected to be as vulnerable to identity dilution however, CSR perceptions are not expected to vary as a function of strategy. We investigate these hypotheses in four experiments.

Study 1 employed a one factor (acquired brand: socially responsible, conventional) between-participants design. MTurk participants (n = 160) read about a sustainable (conventional) all-purpose cleaner brand that was acquired by a manufacturer of cleaning products. Participants then completed measures of CSR beliefs (Wagner, Lutz, and Weitz 2009), and manipulation checks.

Results revealed a significant main effect of acquired brand on CSR beliefs ($F(1, 158) = 4.37$, $p = .04$): CSR beliefs of the acquiring firm were significantly higher in the socially responsible ($M = 4.99$) versus conventional condition ($M = 4.60$). Findings support the prediction that an acquisition of a socially responsible brand bolsters CSR perceptions of the acquiring firm.

Study 2 employed a one factor (acquired brand: symbolic, functional) between-participants design. Participants (n = 171) read about a socially responsible shampoo brand and imagined that they used the brand because it represented sustainability (symbolic) or effectiveness (functional). They then learned that the brand had been acquired by a global corporation. Lastly, participants completed measures of CSR beliefs (Wagner et al. 2009), and manipulation checks.

A significant main effect of brand type was revealed ($F(1, 169) = 10.03$, $p < .01$), such that the functional condition led to higher CSR beliefs ($M = 4.46$) versus the symbolic condition ($M = 3.85$). Results support the prediction that spillover effects from the acquired to acquiring firm are weaker for symbolic (vs. functional) brands.

Study 3 investigates the effect of strategy and brand type on CSR perceptions in a 2 (brand: functional, symbolic) × 2 (strategy: brand development, acquisition) between-participants design (n = 321). The study was identical to study 1, except for the strategy conditions (i.e., brand either developed or acquired).

Results reveal a significant interaction ($F(1, 316) = 4.56$, $p = .03$): For symbolic brands, development ($M = 4.72$) led to higher CSR beliefs than acquisition ($M = 4.06$; $F(1, 316) = 22.43$, $p < .001$), for functional brands, strategy did not influence CSR beliefs ($M_{development} = 4.73$; $M_{acquisition} = 4.67$; $F(1, 316) = 2.88$, $p = .09$). As predicted, for symbolic brands, brand development (vs. acquisition) bolstered CSR perceptions; for functional brands, strategy had no impact.

Study 4 investigates the proposition that identity dilution mediates the relationship between brand positioning and CSR perceptions, such that the identity of a symbolic (vs. functional) brand is diluted to a greater extent, using a one factor (acquired brand: symbolic, functional) between-participants design (n = 167). The study was identical to study 2, with the addition of an identity dilution measure.

Bootstrapping results (Model 4, Hayes 2012) supported a conditional indirect effect of brand positioning through identity dilution of the acquired firm on CSR beliefs of the acquiring firm (indirect effect = .-.18, SE = .06, 95% CI = [-.32, -.07]). Brand positioning had a significant positive effect on identity dilution ($b = .41$, $t(165) = 3.23$, $p < .005$, 95% CI = [.16, .66]), while identity dilution had a significant negative influence on CSR beliefs ($b = -.44$, $t(165) = -8.95$, $p < .001$, 95% CI = [-.53, -.34]). Findings suggest that socially responsible brands used to fulfill consumers' symbolic needs are more susceptible to identity dilution than those used to fulfill performance-related needs, resulting in weaker spillover effects.

In sum, four experiments demonstrate that although positive spillover of CSR perceptions can occur as a result of acquisition, it occurs to a lesser extent when the acquired brand is symbolic (vs. functional) due to identity dilution. Furthermore, the strategy firms should choose to improve CSR perceptions depends on the brand type added to their portfolio. Both brand development and acquisition influences CSR perceptions to the same extent for functional brands. For symbolic brands, new brand development (vs. acquisition) benefits CSR perceptions to a greater extent.

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The Joy of Shopping: A Conceptual Framework of Positive Emotions and Shopping Behavior

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EXTENDED ABSTRACT

How do positive emotions effect purchasing behavior? Surprisingly, decades of consumption and emotion research does not have a conclusive answer to this question, despite its relevance to marketing practitioners and consumers. While little published work directly examines the effect of positive emotions on shopping levels or total purchases, research on the effect of positive emotions on other consumption behaviors conflicts in their implications for shopping levels. For example, positive emotions tend to improve product and ad evaluations (e.g., Kim, Park, and Schwarz 2009), which suggests that they would in turn increase shopping levels. However, other research shows that positive emotions can increase choice deferral (e.g., Etkin and Ghosh 2017) and improve self-regulation (e.g., Winterich and Haws 2011), which have the opposite implication. In the current research, we develop a framework that identifies when positive emotions are more likely to lead to increased shopping outcomes.

Expanding on the Broaden-and-Build Theory of Positive Emotions that demonstrates that different positive emotions elicit specific behavioral tendencies (for a review, see Fredrickson 2013), we propose five positive emotions whose behavioral tendencies could lead to increased purchasing behavior: joy, gratitude, serenity, interest, and amusement. Feelings of joy, for example, evoke a tendency to be more involved with one's environment (Fredrickson 2013), which could lead to increased purchasing if consumers are more engaged with the retail options. See figure 1 for the proposed pathways of each emotion's effect on purchasing behavior.

Further, we reason that the characteristics of the *environment* in which a positive emotion is felt will shape the behavioral outcomes of that emotion. Given that positive emotions are brief (Fredrickson 2013), we suggest that people will only behave in accordance with positive emotions when the environment in which the emotion is experienced is conducive to do so. For example, if the environment is boring, it would be difficult for a shopper experiencing joy to enact the behavioral tendency be more involved with the environment. Thus, we posit that positive emotions should only lead to increased purchasing behavior when the retail environment is conducive for shoppers to act on the emotion's behavioral tendencies. When the environment is not conducive, we propose that the positive emotion could either decrease purchasing behavior if people leave to find a more conducive environment, or have no effect on purchasing behavior if they are not able to leave and the emotion fizzles out.

Three studies, including a field experiment with 1,792,353 grocery transactions, provide initial proof of concept, focusing on joy (studies 1a – 2) and serenity (study 2) in retail stores.

Study 1a was a field experiment with 21 locations of a grocery store, using a 2(positive experience: joy evoking vs. non-joy evoking) + control (no positive experience) between-store design over the course of a single weekend. Study 1b was a conceptual replication of the field experiment, but took place in a store set up in the behavioral lab with an incentive-compatible shopping task.

Importantly, the grocery stores and the behavioral lab store differed in how conducive the environment was for joy's behavioral tendency to be more involved with the environment. The grocery store in the field was familiar, routine, and relatively less arousing for shoppers. For the lab participants, the behavioral lab store was novel, unexpected, and relatively more arousing.

In both studies 1a and 1b, customer-employee interactions were used to elicit feelings of joy. Shoppers in the treatment conditions were handed a flower mid-shopping (by the store's florist in study 1a, and by a research assistant posing as a store employee in study 1b), accompanied by either a joy evoking message (e.g., "We hope you have a great day) or a general positive, but non-joy evoking message (e.g., "Thank you for being a [store] shopper"). A posttest with 242 participants confirmed that receiving a gift with the joy evoking message leads to greater feelings of joy than receiving a gift with the non-joy evoking message ($p<.05$). In the control conditions, no one interrupted the shoppers.

Consistent with our conceptual framework, joy decreased shopping levels (i.e., basket size, total spending) in the familiar grocery store (study 1a) and increased shopping levels in the novel behavioral lab store (study 1b). In study 1a, we used scanner data for each of the stores for the experimental weekend, in addition to the weekends before and after the experimental weekend and corresponding dates from the prior year, yielding 1,792,353 transactions in the dataset. Using an OLS model with binary identifiers for transactions in the joy treatment and the non-joy treatment, with fixed effects for store, day, and hour (standard errors clustered at the store x hour level), we find that transactions with the joy treatment contained significantly *fewer* items relative to transactions with no treatment (b=-.2730, $p<.01$). Further, we find that the effect is strongest in the aisle in which the flower was handed out in and that it fades in aisles further from the target aisle. In study 1b (N=153), participants in the joy condition (M=2.92) purchased significantly *more* items in the target category than participants in both the non-joy (M=2.15, $p<.05$) and control (M=2.40, $p<.05$) conditions. In both studies 1a and 1b, the non-joy treatment conditions did not differ from control ($p>.05$).

Study 2 was a 3(emotion: joy vs. serenity vs. control) X 2(environment: familiar vs. novel) between-subjects study in the behavioral lab store with 129 participants. To manipulate emotion, we used pre-tested audio in the background (emotion-evoking songs in the emotion conditions, and an emotion-neutral podcast in the control condition). To manipulate the store familiarity, half of the participants had a chance to see and explore the behavioral lab store before starting the shopping task. Consistent with the proposed conceptual framework, there was a significant two-way interaction ($p<.05$), whereby participants purchased significantly more when the environment matched the elicited emotion (e.g., serenityXfamiliar and joyXnovel). The control and emotion-environment mismatch conditions did not significantly differ from each other.

In sum, we hope to bridge gaps in the marketing literature with this framework by identifying how positive emotions can affect purchasing behavior.

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The Effects of Duodecimal and Hexadecimal Benchmarks on Package Size Evaluations

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EXTENDED ABSTRACT

Predicting consumers' responses to specific quantity amounts on product packaging can be especially challenging since measures from two very different systems are often simultaneously presented. That is, the Fair Packaging and Labeling Act (FPLA) enacted in 1967 mandated the disclosure of quantity information in inch-pound units, also known as non-metric or imperial units. This method describes quantity using terms familiar to United States (US) consumers such as ounces, pint, fluid ounces, inches, and cubic foot. In 1992 the FPLA was amended to require quantity disclosures on packaging to appear in both metric and inch-pound units. This mandate, informally referred to as dual labeling, is currently in effect and applies to most consumer-packaged goods subject to federal regulation. For example, consider Tropicana orange juice sold in a 34 fl. oz. (1000 ml) carton. We suggest that whether the marketer chooses to highlight the inch-pound (34 fl. oz.) or metric (1000 ml) measure may have significant consumer choice implications since 1000 is a round number in the decimal system and 34 is not.

More specifically, numbers ending in zero such as 10, 500, 9000, and 100,000 as well as their halves (e.g., 5, 250) are typically referred to as round numbers in the decimal system. The greater the number of zeros, the rounder the number (Dehaene and Mehler 1992; Thomas et al. 2010). A large body of literature has shown that round numbers (e.g. 1000), as compared to precise numbers (e.g., 998, 1002), have unique positive characteristics (e.g., Allen et al. 2016; Bhattacharya et al. 2012; Coupland 2011; Dehaene and Mehler 1992; Lynn et al. 2013; Osler 2003; Pope and Simonsohn 2011; Ozcan and Gunasti 2018). Round (vs. precise) numbers are evaluated more positively and are perceived to be more credible (Jerez-Fernandez et al. 2013). A 1000 ml carton of orange juice is therefore likely to be perceived more favorably than a 34 fl. oz. carton of orange juice although the quantities are equivalent.

In this research, we propose and subsequently show that there are two additional types of numbers that share round-like number properties. Specifically, we demonstrate that duodecimals (i.e., multiples and halves of 12 such as 6, 24, and 36) and hexadecimals (i.e., multiples and halves of 16 such as 8, 32, and 64), values commonly used in inch-pound quantity declarations, and values that are considered round numbers in the decimal system (i.e., decimally round numbers) share many similarities. For example, hexadecimal and duodecimal (H/D) numbers possess round-like number properties such that they serve as benchmarks (Dehaene 2001), feel just right (Wadhwa and Zhang 2015), and are associated with a sense of completeness (Gunasti and Ozcan 2016; Yan and Pena-Marin 2017). That is, whereas numbers ending with zeros serve as round numbers when the metric system is used to report quantity (e.g., 100 g, 1000 ml), the round-like number properties of duodecimals (e.g., 12 inches) and hexadecimals (e.g., 16 fl. oz.), along with their halves and basic multiples (e.g., 8 oz., 32 fl. oz., 24 in.), are evident when quantity is declared in inch-pound units.

Since hexadecimals and duodecimals serve as reference points of completion, or benchmarks, we find that an increase (decrease) in package size to a hexadecimal or duodecimal magnifies (reduces) the perceived change in quantity. For instance, an increase in package size from 14 to 16 fl. oz. is perceived to be larger than an increase from 12 to 14 fl. oz., although the absolute increase (2 oz.) is identi-
cal and the relative increase is smaller. In contrast, a downsize from 34 to 32 oz. is perceived to be smaller difference than a downsize from 36 to 34 oz. Furthermore, a downsize (upsize) from a H/D number is perceived to be a larger (smaller) difference than an equivalent downsize (upsize) from a non-duodecimal or non-hexadecimal value. For example, downsizing from 16 to 14 oz. is perceived to be a larger reduction in quantity than the reduction from 14 to 12 oz. whereas upsizing from 32 to 34 oz. is perceived to be smaller than the increase from 30 to 32 oz.

Using a variety of methodologies, we demonstrated that H/D numbers have unique attributes resembling those of decimally round numbers. Namely, H/D numbers serve as benchmarks or reference points, feel "just right," and are associated with a sense of completeness. These attributes have positive effects on consumers' product evaluations and choice preferences. Specifically, our studies clearly demonstrate that consumers express a strong preference for H/D product sizes over non-H/D product sizes when quantity is declared in inch-pound units. These findings are consistent across a variety of consumer choice situations and product categories. We also demonstrate that a product upsize or downsize that results in a H/D number is perceived as a larger change in quantity than an equivalent product upsize or downsize that originates from a H/D number. This finding contributes to research on consumer (mis)perceptions of package size changes (Ordabayeva and Chandon 2013; Vermeer et al. 2010) by demonstrating the key roles played by starting and ending product quantity reference amounts on consumer judgments.

Our investigation of dual labeling suggests that the influence of H/D on consumers' product perceptions and preferences is significantly influenced by whether inch-pound or metric units are the dominant units of measure in a quantity declaration. Results show that consumers were positively influenced by the round-like number properties of H/D when inch-pound units of measures were dominant; the positive influence of decimally round numbers was only evident when metric measures were dominant. Our comparison of the positive effects of H/D numbers and decimally round numbers on consumers' product perceptions and preferences when either the inch-pound or metric measurement system was dominant adds to the body of literature on numerical cognition and consumers' perceptions of quantity change.

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Between Click and Purchase: Predicting Purchase Decisions Using Clickstream Data

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EXTENDED ABSTRACT

Clickstream data provide us with the record of a site visitor's journey on a website (Montgomery, 2001). This navigation path can allow researchers to uncover rich information about each individual customer such as goals (Pirolli & Card, 1999), types of visits (Moe, 2003) and purchase tendency. Among the many highly successful past studies on path information, most describe paths as a sequence of webpages viewed by individual site visitors in accordance with a specific typology of webpages (home page, product information pages, check out pages, etc.). Although past results suggest that customers' sequence of viewed page categories can be good indicators of customers' goals and purchase tendencies (Moe, 2003), the sequence of page categories has limitations in marketing practice. One of the major limitations is the inflexibility of adapting the prediction models to different website, because websites are highly varied in page categories. Another limitation is that the approach of using sequence of page categories lacks the detailed information and insights about what exactly customers are doing when viewing a certain type of page, which can lead to biased prediction of purchase tendency. In order to deal with these disadvantages, we conduct multiple studies to improve the approaches of using path data to predict purchases. We first develop our concept of sequence of online actions as a sequence of viewing behaviours. This conceptualization of browsing paths allows us to describe not just how much activity people engage in at the website, but also what customers are doing while browsing. We then conduct multiple analysis to test whether sequences of viewing behaviours can better indicate purchase tendencies. We finally develop an innovative approach of predicting the next viewing behaviour and using the predicted viewing behaviour to predict purchases.

We first develop the concept of sequence of viewing behaviours. We find that, in the context of searching and purchasing airline tickets, customers' browsing behaviours can be described according to four aspects: whether the customer repeatedly views a group of options; whether the customer filters the options, whether the customer searches for a different departure/arrival date and whether the customer searches for a different departure/arrival city. Accordingly, a customer's browsing can be described as one of the four Viewing Behaviours: repeated-viewing(R), filtering(F), search-for-a-different-date(DD) and search-for-a-different-route(DR). We thus can describe customers' entire journey on a shopping website as the sequence of Viewing Behaviours.

Customers' sequences of viewing behaviours are highly diverse. In order to know whether sequences of viewing behaviours indicate different purchase tendencies, we group them using sequence analysis. We conduct a normalised longest-common-prefix (LCP) method (Elzinga, 2007; Gabadinho et al., 2011) and a classical multidimensional scaling to cluster the sequences. The analysis shows that sequences of viewing behaviours can be clustered into three clusters. We find that Cluster 1 has significantly more search-for-a-different-route(DR) than other three viewing behaviours, while Cluster 2 has more frequent repeated-viewing (R). Search-for-a-different-date(DD) is the most frequent viewing behaviour in Cluster 3. We summarise the purchase rate of each cluster and find that Cluster 2 has a page-level average purchase rate higher than Cluster 1 and Cluster 3. We find, however, the page-level average purchase rate in Cluster 1 is significantly higher than the purchase rate in Cluster 3.

Though both Cluster 1 and Cluster 3 indicate the behaviour of viewing a wide variety of category pages, these two clusters, however, show different levels of purchase tendency. This result also shows that our approach of using customers' detailed viewing behaviours to predict purchases can yield an accurate insight of purchase tendencies in the context of websites where customers search and purchase airline tickets.

We then develop the modelling approach of predicting the next viewing behaviour and using the predicted viewing behaviour to predict purchases. We adopt a multinomial logit model of the customer i's choice of the tth viewing behaviour on the unobserved individual-specific heterogeneity and the information this site visitor observed at the $(t-1)$th page request including average price and number of options. The unobserved individual-specific heterogeneity, captured by the individual-specific latent variable, explains the persistence observed between viewing behaviours. The number of options observed on $(t-1)$th page request is influenced by the site visitor's $(t-1)$th viewing behaviour and was modelled using a Poisson regression model. We adopt a structural equation modelling approach for model estimation and prediction. We use the data of half the customers for model estimation and another half of the customers for validation. Our model estimations are consistent between in-sample and out-of-sample data. We successfully predicted 65% of the viewing behaviours in-sample and 64% out-of-sample. We adopt a logit model of a site visitor i's purchase decision on the predicted viewing behaviour that captures purchase tendency, an individual-specific latent variable that captures other unobserved factors, price and the number of available flight options observed at this page request and the interaction between decision time limit and number of options. Model estimation shows that predicted viewing behaviours are significant both in-sample and out-of-sample. We correctly predicted 58% purchases in-sample and 57% purchases out-of-sample. We achieve an overall hit rate (the correct prediction of both purchases and non-purchases) of 85% both in-sample and out-of-sample. To further develop our model, we will include more variables representing the information on the list elements that each customer views after the search action. Since our dataset includes only the data of domestic flights of one European country, information on carrier is not highly differentiated among the listed options returned for a given search. We accordingly will include the deviations in price and flight durations among listed options to account for the variation among listed elements, aiming at achieving better predictions of browsing path and purchases.

Our research has multiple contributions. First, we contribute to the research on customers' path information by developing the concepts of sequences of customers' viewing behaviours to describe customers' paths within a website. We have shown that customers' sequence of browsing behaviours can uncover more detailed information on purchase tendencies than sequences of page categories. Besides, our approach of summarising path information into sequences of browsing behaviours is easy to adept to websites of varied structures and page categories. Second, we develop a modelling approach of using sequence of browsing behaviours to predict purchases. Our modelling approach involves a reduced computation load, while achieve a competitive prediction rate compared with past successful models using sequence of viewed page categories in past studies. Our modelling approach also has the potential to contribute to the research area of attribution modelling (Kannan, Reinartz &

Verhoef, 2016; Li & Kannan, 2014; Song et al., 2017) through providing alternative ways of extracting customers' actions in the path to purchases.

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This May Take a While: Differences in Difficulty of Recall Between Hedonic and Eudaimonic Purchases

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EXTENDED ABSTRACT

While research on happiness from consumption continues to uncover novel insights (Mogilner, Aaker, and Kamvar 2012), there are increasing calls for research for moving beyond a hedonic paradigm (wherein happiness is equated with pleasure and fun) to focus on eudaimonia (wherein happiness is equated with meaningfulness) in consumption contexts (Alba and Williams 2013; Schmitt, Brakus, and Zarantonello 2015). Despite burgeoning scholarly support for studying eudaimonia (Ryan and Deci 2001; Vitterso 2016), however, few research efforts have investigated this distinction till date (Gupta 2018; Percival Carter and Williams 2014).

Consequently, the present research aims to illustrate how consumers remember pleasure and meaning differently from the purchases they make. Given extant research on cognitive differences between hedonia and eudaimonia (Bartsch and Hartmann 2017; Kahneman 2011), we demonstrate via three studies how consumers tend to connote happiness with hedonic purchases even though eudaimonic purchases provide more enduring meaning. This effect appears to be driven, in part, by differences in difficulty of recall as eudaimonic purchases are perceived as being harder to remember than hedonic purchases.

In studies 1A (N = 105) and 1B (N = 105), we assessed the nature of purchases which consumers associate with the idea of happiness. Given prior research showing how eudaimonic experiences are cognitively more complex than hedonic experiences (Bartsch and Hartmann 2017; Vitterso 2016), we hypothesized that consumers will tend to recall purchases that were more hedonic than eudaimonic in nature when asked to recall a purchase that made them happy. We further hypothesized that difficulty of recall would be negatively related to the extent to which the purchase was hedonic and positively related to the extent it was eudaimonic. As a robustness check, this was tested in an experimental setting between respondents who faced a time constraint during the recall task (60 seconds in study 1A and 30 seconds in study 1B) and those who did not.

As expected, results from study 1A showed that respondents in both conditions recalled purchases that were higher in hedonia (the extent to which the purchase was enjoyable and fun, pleasant and pleasurable, and helped them pursue something that was pleasing to their senses; α = .85) than in eudaimonia (the extent to which the purchase was deeply meaningful to them, strongly resonated with their identity, and helped them pursue something they believed in; α = .84). A measure of net hedonia was calculated by subtracting the eudaimonia score for each purchase from its hedonia score. For those in the unconstrained condition, the average value for net hedonia (M = 1.87, SD = 1.92) was significantly different from 0 (t(52) = 7.10, p < .001). Similarly, for those in the time-constrained condition, the average value for net hedonia (M = 2.22, SD = 1.93) was also significantly different from 0 (t(51) = 8.29, p < .001). As a final confirmation, a MANCOVA analysis conducted to check for group differences in hedonia and eudaimonia showed no significant overall effect for experimental condition (Wilk's lambda = .98, p > .05). Respondents in both conditions, therefore, self-selected hedonic purchases from their memory. Finally, a regression analysis for difficulty of recall (the effort it took to recall the experience, the amount of thought it took to recall the experience, and how easy or difficult it was to recall the purchase; α = .84) with the mean-centered values for

hedonia and eudaimonia was overall significant (F(2,102) = 14.73, p < .001) and showed a negative effect of hedonia (β = -.49, t(102) = -5.41, p < .001) and a positive effect of eudaimonia (β = .19, t(102) = 2.06, p < .05), as had been hypothesized.

Study 1B replicated these results under an even stricter time constraint of 30 seconds. As before, the average value for net hedonia (M = 1.38, SD = 1.95) for those in the unconstrained condition was significantly different from 0 (t(55) = 5.28, p < .001). Similarly, the average value for net hedonia (M = 1.46, SD = 1.64) for those in the time-constrained condition was also significantly different from 0 (t(48) = 6.23, p < .001). A MANCOVA analysis conducted to test for differences in hedonia and eudaimonia, moreover, showed no significant overall effect for experimental condition (Wilk's lambda = .99, p > .05). Finally, a regression analysis was again overall significant (F(2,102) = 5.22, p < .05), showing a negative effect of hedonia (β = -.29, t(102) = -2.82, p < .05) and a positive effect of eudaimonia (β = .26, t(102) = 2.56, p < .05). Thus, the findings from study 1A were substantiated.

Study 2 (N = 106), finally, aimed to provide a stronger test by manipulating purchase type and looking at differences in difficulty of recall. Respondents were randomly allocated to either a hedonic or a eudaimonic purchase condition and asked to recall a specific past purchase of that type. Following this, they rated the difficulty of recalling that particular purchase (α = .81). As predicted, an ANOVA analysis conducted to test for differences in difficulty of recall was significant (F(1, 104) = 4.05, p < .05). Respondents in the eudaimonic condition reported that they found it more difficult to recall a purchase (M = 3.83, SD = 2.30) than those in the hedonic condition (M = 2.98, SD = 2.06).

Collectively, results support the original hypotheses that consumers tend to construe happiness in more hedonic terms, and that it is more difficult for them to recall meaningful purchases as compared to pleasurable ones. While this is not necessarily undesirable, it may result in situations wherein a larger share of a consumer's discretionary spending ends up being funneled toward primarily hedonic purchases (which often provide fleeting happiness) rather than primarily eudaimonic purchases (which usually provide enduring happiness) given how ease-of-retrieval can influence consumer judgments (Menon and Raghubir 2003; Schwarz et al. 1991). Happiness, thus, is not remembered equally and we need to be aware of the siren call of hedonic purchases if we wish to progress on an overall eudaimonic path in our pursuit of happiness through the marketplace.

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Paradoxical Safety Signals: Cultural Tightness Shapes
Contingent Meanings of Interstitial Space in Logos

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EXTENDED ABSTRACT

Visual subtleties in logo design influence consumers' brand evaluations. While prior research has focused on logo-element characteristics such as shape (Henderson and Cote 1998; Jiang et al. 2016), there is less research on the spatial arrangement of elements within the logo (Rahinel and Nelson 2016). This paper focuses on the design feature of interstitial space between logo elements. Compact logos are characterized by elements tightly huddled together with minimal interstitial spacing, whereas spacious logos are characterized by dispersed elements with significant interstitial spacing.

An important goal of visual branding is to signal brand safety. For example, boundaries, logo frames, and stable centre-of-gravity enhance brand-safety perceptions (Cutright 2011; Fajardo et al. 2016; Rahinel and Nelson 2016). Some research suggests that interstitial space or white space can increase brand-safety perceptions by connoting prestige and quality (O'Guinn et al. 2015; Pracejus et al. 2006, 2011; Sevilla and Townsend 2016). This paper aims to extend prior findings by demonstrating that interstitial space can signal high or low safety, depending on consumer characteristics. Visual design elements often act as metaphoric abstractions of physical experiences (Deng and Kahn 2009; Rahinel and Nelson 2016). We propose that compactness can either be a source of safety or restriction. When people feel unsafe, they tend to huddle together, and individually they often bring their body parts close together in a self-protective stance. To the extent that logos are interpreted metaphorically, these notions suggest that spacious designs may be ineffective safety signals for consumers concerned with avoiding threats or sources of uncertainty. At the same time, restricted space or movement can also reduce the sense of autonomy; people crammed in a small space tend to exhibit reactance to reclaim their sense of freedom (Levav and Zhu 2009). Hence, we predict that consumers concerned with uncertainty avoidance prefer compact logos, but consumers with high need for autonomy prefer spacious logos. We further predict that these differential preferences are prevalent in tight versus loose cultures, respectively.

Relatively tight (loose) cultures have many (few) strongly enforced rules and less (more) tolerance for deviance and individual freedom (Gelfand et al. 2011). In tight cultures, chronic ecological and social threats lead to chronic states of high perceived risk and need for structure (Gelfand et al. 2011). These threats increase the relative value people place on safety over autonomy. Conversely, loose cultures allow breathing-space without impeding personal freedom. We propose that although spacious logos connote safety in loose cultures, they decrease safety perceptions and brand preference among tight cultures. Pracejus et al. (2006; 2013) found that the positive effect of white space on brand perceptions mitigates among Asian consumers. We extend this cross-cultural argument in the realm of interstitial spacing between logo elements by demonstrating intra-country differences tied to regional differences in cultural tightness.

In Study 1, we analyzed the Lovett et al. (2014) dataset, with real-market evaluation measures of over 500 brands. We downloaded and coded the logos as compact, spacious, or intermediate. Analysis revealed that while spacious logos directly reduce brand safety, they also indirectly increase safety by enhancing perceptions of brand prestige and quality. Indirect effects on brand preference via brand safety mirror the same pattern.

Studies 2-3 showed that safety concerns decrease the preference for spacious (vs. compact) logo design, but that this effect depends on relative need for safety (vs. autonomy). Study 2 was a design-choice task where participants chose between pairs of compact versus spacious abstract designs and indicated their general need-for-structure and need-for-autonomy. Study 3 was a brand evaluation task with a 2 (logo design: compact vs. spacious) x 2 (need: safety vs. autonomy) between-subjects design, where they were shown an ad for a fictitious brand of running shoes and indicated their category-specific need-for-safety and need-for-autonomy. Results in both studies indicated that safety concerns discourage preference for spacious designs, but that need for autonomy can counteract this effect.

We further theorized that the design associations depend on cultural tightness. Study 4 was a fluency task to establish the metaphoric linkages of interstitial space to (lack of) safety. A word recognition task varied design (compact vs. spacious) between-subjects and word-meanings within-subjects (safety vs. autonomy vs. neutral). Participants reported cultural-tightness via a scale adapted from Gelfand et al. (2011). We found that that spacious (vs. compact) designs led to less (more) accurate recognition of safety- (autonomy-) related words. Moderation analysis showed that the unfavorable effect of spacious designs on accuracy of safety-related words was significant among culturally-tight, but not culturally-loose, participants.

Studies 5 (India) and 6 (U.S.) replicated these cultural differences in a brand evaluation task. In both studies, participants evaluated a fictitious mobile-wallet app on brand preference and brand safety. Cultural tightness was measured at an intra-country, regional level. Using a 2 (logo design: compact vs. spacious) x 2 (culture: tight vs. loose) between-subjects design, Study 5 revealed that spacious (vs. compact) design engenders lower (higher) perceived brand safety among participants from tight (loose) regional cultures within India. PROCESS Model 7 revealed a similar pattern of the indirect effect on brand preference via brand safety. Study 6, by adding a third factor of 2 (brand framing: secure vs. flexible), replicated the same effect with U.S. consumers, while also demonstrating a boundary condition: alternate safety cues mitigate the effects.

This research extends the understanding of compensatory control via visual design, showing that interstitial space can increase or decrease safety perceptions and brand evaluations, depending on the consumers' cultural tightness or needs for structure and autonomy.

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Basic Basic Needs: The (Biased) Belief that Low-Income Consumers Need Less

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EXTENDED ABSTRACT

While marketing tactics indiscriminately target consumers of all socio-economic backgrounds, lower income consumers are often judged more negatively for making the same purchasing decisions as their higher income counterparts (Olson et al., 2016). The current work extends on this previous research by demonstrating a more fundamental bias against low income consumers. Not only are wealthier individuals not judged for their purchases because they can afford to splurge on the things they want, but our research suggests that the wealthy are perceived to fundamentally 'need' those items more. On the other hand, we find that lower income individuals are judged more negatively after making the same purchases because they are perceived as fundamentally needing those item less.

Experiment 1 demonstrates that needs are not universal, but rather the categorization of different features as 'needs' or 'wants' is influenced by the wealth of the target. Participants (N=300) read about a hypothetical family of four who were moving to a new city. They are either given no information about income (control) or assigned to one of two income conditions and told that the family's annual household income is $111,000 ($30,000) putting them in upper (lower) 25% of all US households. Participants were asked to categorize thirty different features of a home (e.g. 'is clean', 'lead-free', 'is heated', 'has privacy') as either a 'need' or a 'want' for the family. Overall, participants categorized significantly fewer features as a 'need' in the low income condition than in either the high income or the control condition (M_{low}=10.55 vs. M_{high}=13.5 and M_{con}=12.4; $F(2,299)$=8.9, p<0.01). Post hoc analysis shows there is no significant difference between number of needs in high vs control conditions. Overall, the low income family was perceived as having significantly fewer 'needs'.

In Experiment 2 we sought to replicate these findings in other domains using a continuous, rather than categorical, measure of 'needs' and 'wants'. Participants read about a young man who makes either $12,000 or $120,000 a year who is looking for a new place to live, a car, and a personal computer. Participants rated the consumers need for different features/ attributes of these items on a scale from 1= 'entirely a need' to 7= 'entirely a want'. We find that across these items, participants perceive higher income consumers as having a greater overall need across attributes. For example, participants perceived the higher income consumer to have a higher need for updated braking technology and working air conditioning in their car.

Experiment 3 expands on the previous experiments by showing a downstream consequence of this effect. Participants read about a woman named Alex who is shopping for a car seat for her first child. Participants are informed that Alex and her partner have either a high (vs. low) paying job and would be considered a high (vs. low) income family. Alex is choosing between two car seats (A- $180 and B- $250), that have the same high safety rating, but B is equipped with an easy installation system and has adjustable headrest for comfort. All participants are told that Alex chooses to buy option B and are asked the extent to which her choice was a 'need' or 'want' (1='entirely a need'; 7='entirely a want'). Participants then rated the extent to which they believe Alex made a responsible decision, an impulsive decision, a thoughtful decision, and if she deserved to buy the option she did (1=strongly disagree; 7= strongly agree).

Participants who read about a low income consumer perceived the car seat to be less of a need than those who read about a high income consumer (M_{low}=4.14 vs. M_{high}=3.60; $t(198)$=2.1, p=0.04). Participants also had significantly less positive perceptions of the consumer's choice to buy the premium car seat when the consumer was low income (M_{low}=4.45 vs. M_{high}=5.46; $t(198)$=-6.3, p<0.01). Overall, the low income consumer was judged as having made a less responsible decision, less deserving, less thoughtful and more impulsive (p<0.01 for each measure) even though the same car seat was purchased in both conditions.

Experiment 4 provides further evidence of the effect, demonstrating that higher income consumers are perceived as needing both safety and convenience more than lower income consumers. In this study, participants read about a consumer who either makes $12,000 a year or $120,000 a year and is buying his first car. At the dealership he is told he can have a rearview camera installed. We manipulated whether the camera was framed as a safety feature (increased visibility) or a convenience feature (ease of parking). In all conditions the consumer decides to buy the camera.

Participants categorized the camera as less of a need (more of a want) for the low income consumer, regardless of the safety vs. ease framing (M_{low}=6.4 vs. M_{high}=4.1; $F(1,399)$=21.5, p<0.01). In fact, the higher income consumer is perceived as needing the camera framed as an ease feature more than the low income consumer is perceived as needing the camera framed as a safety feature. Subsequently, the low income consumer is judged more negatively for their purchase (M_{low}=3.4 vs. M_{high}=4.8; $F(1,399)$=133.3, p<0.01). We demonstrate that the effect of income on negative judgments is significant mediated by the perception of need for the item. That is, lower income consumers are perceived as having less of a need and are therefore judged more negatively for making the same purchasing decision as a higher income consumer.

In summary, this research shows the same items and features are perceived as more of a need for high income individuals than low income individuals. As a consequence, lower income consumers are perceived more negatively than higher income consumers after making the same purchasing decision. This work extends past research on the negative judgements and dehumanization of lower income individuals by demonstrating that they are perceived as having fundamentally fewer needs than higher income individuals.

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Liking, Loving, and Buying: Linking Facebook Engagements to Consumer Purchase Frequency

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EXTENDED ABSTRACT

This paper reports on research that investigates whether the way a customer engages with a branded Facebook post (e.g. liking, commenting, sharing, etc.) can predict subsequent behavior. Specifically, if a customer engages in a certain way, does that increase the likelihood that he or she will become a more frequent purchaser?

Although some prior studies have used company data to examine engagement and sales, each has limitations in answering the specific questions that we have outlined. Our research builds on these studies by examining digital consumer engagement (DCE) at the individual customer level, determining the impact of specific types of Facebook engagements on customer visits, and identifying the types of Facebook engagements that are most closely associated with purchase frequency.

Several authors have hypothesized that differing forms of DCE reflect different intensities of engagement (e.g., Avnet and Higgins 2006; Hollebeek, Glynn, and Brodie 2014; Gavilanes et al. 2018). These social engagements represent a hierarchy ranging from positive attitudes (Likes) to cognitive engagement (Comments) to advocacy (Shares) (Gavilanes et al. 2018). There are also newer engagement types (Emoticons, such as Love, Wow, Hahas) which may reveal more intense feelings than a simple "Like" (Abutaleb & Nair, 2016). As such, we tested the association between various Facebook engagements and their association with purchase frequency. These included "Likes," "Loves," "Wow's" "Hahas," "Comments," and "Shares."

Hypothesis:	*"Liking" brand-sponsored content in a virtual brand community is associated with increased future purchase frequency.*
Hypothesis:	*Reacting with a positive emoticon (Love, Haha, and Wow) to brand-sponsored content in a virtual brand community is associated with increased future purchase frequency.*
Hypothesis:	*"Sharing" brand-sponsored content in a virtual brand community to one's network is associated with increased future purchase frequency.*
Hypothesis:	*Positively commenting on brand-sponsored content in a virtual brand community is associated with an increase in future purchase frequency.*
Hypothesis:	*Negatively commenting on brand-sponsored content in a virtual brand community is associated with a decrease in future purchase frequency.*

To answer these questions, the authors used archived purchase history and social media activity data to investigate the relationship between the type of social media engagement and patronage behavior. The setting was the Facebook community of a national Quick Service Restaurant (680 locations in 40 states) that has a large Facebook presence with over 600,000 followers and maintains an active loyalty program with approximately 712,000 enrollees. When a loyalty member visits a location and makes a purchase, he or she uses an app that records each purchase. By using the app, customers collect reward points to redeem on food and other merchandise.

Social media engagers were sourced from publicly available data on the brand's Facebook page over a 3-month time period from November 1, 2017 – January 31, 2018. Study participants were U.S. residents and members of both the brand's Facebook page and its loyalty program. A sample of 1,122 individuals' engagements across 22 branded Facebook posts was recorded, ranging from single to multiple engagements per individual (1,583 total engagements). Likewise, we captured purchase visits for each individual during the pre-test, engagement, and post-test periods.

Measures included the dependent variable store visits (post-engagement) and the following independent variables: previous store visits during the pre-engagement period (to account for endogenous variable of pre-existing store purchase frequency) and engagement type (Emoticons such as Like, Love, Wow, and Haha, Sharing, and Commenting). We also recorded comment valence (positive, neutral, or negative) and whether a commenter tagged another Facebook member.

We used a negative binomial regression model since the data was count data (vs. continuous variables) with a large number of zeros appearing in the dependent variable (store visits). A negative binomial model is especially useful for over-dispersed count data, specifically when the conditional variance exceeds the conditional mean. In addition, Ehrenberg's assertion that a brand's customer base is best described by a negative binomial distribution of buying rates gives further credence to use a negative binomial regression model (Ehrenberg, 1959). Some noteworthy findings include:

- "Likes" did not predict purchase frequency. Consistent with studies that downplay liking a brand's page (John et al. 2017), simply liking branded posts does not impact purchase visits. Despite being an almost universally employed social media metric, "Like" is a passive form of engagement that should be questioned as a viable metric.
- Out of the emoticons, "Love" (+21% predicted increase in purchase visits) was the only emoticon that showed positive significance for purchase visits. "Wow" and "Haha" showed no association and the negative emoticons ("Sad," "Angry") were rarely used, suggesting that beyond "Love" there is little value in measuring customer engagement via emoticons.
- Sharing posts with others indicates strong commitment to the brand. Among all engagers, sharing was associated with a doubling of purchase visit frequency (+102%). "Tagging others with a comment" also achieved marginal significance (predicted purchase visit increase 22.5%) among all engagers.
- Comment valence was associated with changes in purchase visit frequency. "Positive" comments were significant and were associated with an increase in purchase visits by more than 20%. On the other hand, "Negative" comments were associated with decreased future purchase visits (-17.7%). Interestingly, negative commenters had more than twice the number of purchase visits (4.41) as all other engagers (2.16) in the pre-engagement period (prior to making the negative comments). One interpretation is

that passionate customers were more likely to take the time to express their dissatisfaction.

This study has introduced a method that can reveal the effectiveness of various forms of social media engagement. It includes a traditional brand health measure, e.g. purchase frequency, to understand the impact of SNA (Gavilanes, et al. 2018). We have shown that some engagements ("Love," "Positive Comments," "Sharing") are more likely than other engagements to be associated with store purchase visits. Furthermore, "Negative Comments" should be taken seriously as clear warning signs that something is not right among a once frequent set of purchasers. Regardless, the customers who take the time to engage represent a larger opportunity for the brand than the indifferent customers who engage minimally (with just a "Like") or not at all.

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Consumer Responses to Sexual Humor Advertisements

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EXTENDED ABSTRACT

In a Dannon Oikos television commercial, actor John Stamos and his girlfriend playfully feed each other yogurt. He smears yogurt on his lips and she kisses him clean. Stamos then spills yogurt on his lap. After she looks down to his lap and licks her lips, former sitcom co-stars Dave Coulier and Bob Saget interrupt the scene with playful banter in character from their television show, Full House. This advertisement first aired during the Super Bowl in 201_ and is among the most highly rated Super Bowl ads in recent years (Hortillosa 2013; Streib 2012). It represents an advertising strategy that combines sexual content with humorous content. While the utilization of sexual humor as an advertising strategy is common in practice, scant research on the topic exists in advertising literature despite the existence of various unanswered questions. For example, how are advertisers utilizing sexual humor in advertisements and how do consumers respond to sexual humor advertisements? In this study, we employed a sequential exploratory mixed-method research design (Creswell 2011) to understand patterns in the utilization of the sexual humor content in commercials and examine how consumers make sense of, and respond to, sexual humor advertising. To do this, we first identified advertisements that included both sexual and humorous content that aired during the Super Bowl between 2004 and 2014. We then conducted three focus groups with 5-7 undergraduate college students and had them respond to various commercials. We learned from the focus groups that there are nuances regarding the combination of sex and humor that influence how consumers react to such depictions. Specifically, we found indications that the order in which sex or humor occurs in a commercial, as well as the intensity of the sex and humor depictions, impact how consumers respond to the commercial itself and the product depicted in the commercial.

First, our respondents recognized differences in advertising strategies that relate to how sexual humor is defined or the type of sexual humor employed. We labeled the strategies they described as (1) sex as humor and (2) sex and humor. The former represents a strategy wherein the sexual content is part of what make instances humorous; the latter represents a strategy wherein the sexual content is distinguishable from the humorous content. One participant's responses specifically highlight how they make sense of the distinction between sex as humor and sex and humor.

"I think the humor in this commercial compared to other ones is a little bit better because it was just humor. It wasn't like sexual humor…(wherein) the humor wasn't the sex you know…where they were trying to intertwine it. It was just humor in general. So, we had like the nice balance of like, there was sex at the beginning, but then it was totally different humor." (Violet, female, 23)

Thus, distinguishing sexual humor strategies by type represents one way of breaking down compositional elements of the approach. Second, our findings suggest that sexual humor can also be distinguished by the sequence in which each content type is presented, that is, whether sexual content is presented before, after, or concurrent with the humorous content. Thus, we describe three sequential variants of the "sex and humor" approach as: (1) the sexual sequential approach, wherein the sexual content is followed distinctly by humorous content; (2) the humorous sequential approach, wherein the humorous content is followed distinctly by sexual content, and (3)

multiple sequential approach, wherein the sexual or humorous content is followed by the other content type, then followed again by the opposite content type (e.g. sexual content, then humorous content, then sexual content; or humorous content, then sexual content, then humorous content).

Second, our findings suggest that sexual humor strategies vary by the intensity and balance of each content type. Our respondents suggest that the strength or intensity of the sexual content, or humor content, affects how the overall strategy is received by consumers.

"So being high sexuality can make people very uncomfortable. But then if you match that intensity with the humor, I think it kind of balances out to where anybody can really appreciate the commercial. If you look at some of the commercials that are like just super sexual, they probably don't do as well, but you add the humor aspect in that, it helps that. Balancing the humor and sex appeals to more audiences. Because if it's a lot higher sex, and low humor, it can make some people feel awkward. Where if it's high on both, then I think everyone can kind of get behind the ad and at least understand the message they're trying to convey." (Michael, male, 20)

Again, our respondents suggest that sexual humor ads can be distinguished on the level of humor and sexual content. For example, extremely sexual ads (described as high sex levels) can be combined with low or high levels of humor content and vice versa. According to respondents, the humor needs to match or exceed the level of sexual content intensity. We also recognized possible gender differences in how consumers react to these combinations. These insights led to Study 2, in which we examined these possibilities more deeply by surveying students using measures reflecting perceptions of sex intensity and impact, humor intensity, and order of presentation to gauge their influence on attitudes toward the ad and brand depicted in the commercials. The sample for Study 2 included undergraduate students in a variety of marketing courses at a mid-sized, public university in the Midwest. The students were asked to view the commercials and respond to the survey during a normal class period. There were 201 students total in these courses and complete responses were received from 191 of the potential respondents.

Prior work consistently finds that males and females react differently to sexually oriented depictions in advertising with women (compared to men) typically responding more negatively to such portrayals (cf. Dahl, Sengupta, and Vohs 2009). The integration of humor and sexual content also yielded gender differences that do not entirely replicate what has been found in previous research on how males and females respond to sexual content in ads alone. For example, while in Study 2 a small but positive relationship between ad sex intensity and attitude toward the ad exists for females, not for females. Similarly, a positive relation between perceptions of the impact of sex and attitude toward the brand is found for males but for females. When sex intensity is combined with impact of sex perceptions and related to attitude toward the ad, a positive relation, is found manifested for men but not for women (i.e., no relation). On the other hand, males rated the intensity and impact of sex ad depictions lower than did women. One explanation of these unexpected results can be attributed to males being more likely to take notice of sexual content while at the same time dismissing its impact while fe-

males do not develop positive associations among depictions of sex and attitudes toward the ad or the product depicted in the ad. These findings seem to parallel some prior work that has focused on how males and females respond differentially to depictions of sex in ads.

Specifically, and because of our qualitative work, we also investigated how perceived intensity of sex and humor depictions, the perceived impact of sex, and the order of sex and humor in a commercial strengthened, mitigated, or diminished how consumers respond to such depictions as reflected in their attitudes toward the ad and brand shown in the commercial.

We found that intensity of how sex is depicted has a negative relationship with attitude toward the ad, but that this relationship is only significant for women, which corresponds to prior work, for example, Dahl, Sengupta, and Vohs (2009). Yet, a reverse gender effect is found when the interaction of sex intensity and impact of sex is examined regarding its influence on attitude toward the brand, that is, while still negative, the negative effect exists for males but not females. This result is somewhat surprising, but might be explained by the notion suggested previously, that males make note of explicit depictions of sex while females may disregard them because of that exact type of content. The result of these disparities in how the commercial is viewed is that males now assign negative perceptions to the product in the commercial, while females potentially fail to make any associations because they have dismissed the commercial's message due to how sex is used in the commercial.

Combining humor with sex also results in additional, interesting findings. When sex depictions are perceived as intense and humorous, there is a positive effect on attitude toward the brand. When the intention of a sexual content is not perceived as funny, sex intensity has a negative effect on attitude toward the ad. Apparently, for the respondents in our sample, attitude toward the brand and attitude toward the ad are perceived to be separate entities because the effects of sex and humor are not the same across both dependent variables. Finally, the order in which sex and humor depictions occur in a commercial also seems to make a difference in terms of attitudes toward the ad and product. For example, if humor occurs simultaneously or after the depiction of sex, these combinations can nullify the negative effect of sex on attitude toward the ad. Consequently, the take-away for advertisers is that humor, matters in that humorous depictions can mitigate, at least somewhat, the deleterious effects of sexual depictions.

We undertook these studies in order to add to understanding on how two advertising formats that are often times used in isolation interact when combined in ad development. We found that humor appears to have an overall positive effect even when combined with depictions of sex, that is, sex can be beneficial in terms of attitude toward the brand when it is perceived as humorous. Moreover, our findings indicate that there are gender differences regarding sexual content that mimics as well as dispels certain commonly held beliefs about how males and females react to commercials that depict sex and humor. For example, and regarding the latter, male college students react more negatively (in terms of attitude toward the brand) to sex intensity when combined with impact of sex than do females.

From a managerial perspective, our results suggest that humor is an important factor to consider in ad development. Sex, too, can have a beneficial effect if it is combined with humor such that it is perceived in a humorous context. In addition, other nuances regarding sex and humor were studied that also have implications for managers. For example, the order in which sex or humor appears matters, that is, we found that humor can mitigate the negative effects of sex depictions when humor is shown at the same time or after sex content. Consequently, for managers, sex delineations in advertising might still be a viable option but they need to be revealed in a humorous context.

We believe we have identified indications of when and how sex and humor can be combined in commercial content. We hope that our results spur additional work in this area that would clarify further how sex and humor can be united in ways that are of maximum benefit to practitioners and heightened acceptability and enjoyment by consumers.

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Parenting Motivations, Source Attractiveness, and Advertising Evaluations

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EXTENDED ABSTRACT

Studies of advertising and social comparison have noted that when an attractive model elicits negative emotions about one's own self-image or generates self-presentational concerns, advertising evaluations and purchase intentions are negatively impacted (Bower 2001; Buunk and Dijkstra 2011; Richins 1991; Wan and Wyer 2015). While these important studies highlight how self-perceptions impact responses to attractive models in advertising, we propose that other salient goals and motives unrelated to one's own self-image can also influence how consumers respond to source attractiveness. One such motive is parenting.

When an individual becomes a parent, they seek others who are kind and understanding, cooperative, stable, and helpful in childcare (Gray et al. 2015; Little, Burt, and Perrett 2006; Simpson and Gangestad 1992). However, inferences about physically attractive individuals typically do not reflect these traits. Because physically attractive individuals may be viewed as less warm, more self-centered, and unsympathetic (Cash and Duncan 1984; Dermer and Thiel 1975; Fiske et al. 2002; Wheeler and Kim 1997), we propose that these inferences will become more impactful to the judgment and decision making of individuals with a parenting motivation.

We predict that consumers with a parenting motivation will be less favorable in their evaluations of advertisements featuring physically attractive models relative to those without a parenting motive. Because of the salience of parenting motives, consumers will be more sensitive to cues associated with the parental ability of others and subsequently infer that physically attractive individuals have lower parental competence. These inferences will mediate the relationship between parenting motives and ad evaluations.

For Study 1, three groups of individuals (single individuals without children, individuals in a committed relationship without children, and individuals in a committed relationship with children, N=147) were specifically recruited from Qualtrics panel services. All participants viewed six ads (two ads featuring attractive models, two ads featuring average-looking models, and two ads with no models) from a variety of brands that were displayed in a random order. To examine the effect of each participant group on attitudes towards the ads, a repeated-measures ANOVA with each participant group (between-subjects factor) predicting attitudes toward the ads featuring attractive models, the ads featuring average models, and the no-model control ads (within-subjects factors) was conducted. A significant interaction of participant group and ad attitudes was observed (F(2, 144) = 7.42, p < .001). Post-hoc comparisons revealed that individuals in a relationship with children rated the ads featuring attractive models less favorably (M = 4.96) than single individuals without children (M = 5.62, p = .01) and individuals in a relationship without children (M = 5.79, p = .001). Additionally, no differences in attitudes were observed between the single individuals without children and individuals in a relationship without children (p = .49). Furthermore, no differences in attitudes were observed across the participant groups for either the average model ads or the control model ads (all comparison ps > .26).

Study 2 was designed to generalize the findings of study 1 by experimentally priming parenting motives. After watching a slide show (parenting vs. control), participants evaluated an advertisement for a pen and provided their purchase intentions toward pen on two items adapted from Lee, Choi, and Li (2014). Results of an ANOVA revealed a significant interaction of motive and ad type (F(1, 221) = 4.80, p = .029). Furthermore, the main effects of motive (F(1, 221) = .51, p = .48) and ad type (F(1, 221) = .94, p = .33) were non-significant. Planned comparisons revealed that for participants who viewed the attractive model ad, purchase intentions were lower for individuals with a parenting motive (M = 2.61) relative to individuals in the control condition (M = 3.31, 95% CI [-1.38, -.03], p = .042). However, for participants who viewed the average model ad, no differences were observed for individuals with a parenting motive (M = 2.90) relative to the control condition (M = 2.54, 95% CI [-.32, 1.03], p = .30).

Study 3a was designed to test our process explanation for why individuals with a parenting motive are less favorable toward advertisements featuring attractive models. Two-hundred forty-three individuals (58.2% female, Mage = 34.4) were recruited from Amazon MTurk. Participants were randomly assigned to a 2 (motive: parenting or control) x 2 (ad type: attractive model or average model) between-subjects design. Participants completed the relationship priming from the previous study, evaluated an ad for contact lenses, and completed four items measuring the perceived parental competence of the male models adapted from Dion et al. (1972). To test our full conceptual model, we conducted a moderated mediation analysis via PROCESS model 8 (Hayes 2013). In the model, the motive x ad type interaction predicted perceptions of parental competence, while perceptions of parental competence predicted product attitudes. In our analysis, the 95% confidence interval of the index of moderated mediation excluded zero (index = -.3267, 95% CI [-.6823, -.0205]). Additionally, the indirect effect was significant for the attractive model ad (effect = -.2742, 95% CI [-.5383, -.0402]), but not for the average model ad (effect = .0524, 95% CI [-.1438, .2615]). Together, these results provide support for our full conceptual model of parenting and advertising evaluations. Study 3b replicated the results of study 3a with female models.

Studies 4 and 5 were designed to explore boundary conditions to our observed effects. Specifically, in Study 4 we showed that when an attractive model is framed to possess experience in caring for children, our observed effects reversed and a physically attractive source led to enhanced preferences toward the product for individuals with a parenting motive. Additionally, in Study 5 we found that positioning as requiring parental involvement made consumers with a parenting motive more favorable toward products marketed with attractive sources. Together, our findings provide novel insights into the impact of parenting motives on evaluations of advertising featuring attractive sources.

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The Allure of Arrogance: When Arrogance in Persuasive Communication Enhances Consumer Attitudes

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EXTENDED ABSTRACT

To persuade buyers and signal superiority relative to the competition, companies use a variety of tactics to emphasize the benefits of their products and brands. In the process of emphasizing one's superiority, however, a brand may be viewed as arrogant by consumers if it exhibits an exaggerated sense of superiority while simultaneously disparaging competitors (Brown 2012). While many studies have noted the detrimental effects of arrogance, we propose that arrogance may have beneficial effects when individuals have a salient relationship motive.

We predict that individuals with a relationship formation motive are more accepting of arrogant displays given the importance of self-promotion during the relationship formation process. Because of the importance of emphasizing one's unique characteristics relative to potential rivals during the initial formation of romantic relationships (Buss 1988), we propose that this greater acceptance of self-promoting behaviors extends into more favorable responses toward arrogance in persuasive communications. Furthermore, boundary conditions to this effect are identified, such as the type of product being featured (image-enhancing vs. non-image enhancing) and perceptions of the brand (luxury vs. value).

In Study 1, 144 undergraduate students (46.5% female, M_{age} = 21.4) were randomly assigned to a single-factor (ad type: arrogant vs. control) between-subjects design. First, participants were asked to indicate whether they are currently in a relationship. 63 participants reported that they are currently not in a relationship, while 81 participants reported that they are. Participants who said they were currently in a relationship were asked to provide the duration of the relationship in years and months (M = 2.79 years). Relationship length was converted to total years for all participants (e.g. 2 years and 6 months equals 2.5) and participants not in a relationship were coded as 0. Next, participants were shown one of two print ads for a Samsung phone (arrogant ad condition: slogan of "Bend to those who are worthy"; control ad condition: no slogan). Then, participants provided their attitudes toward the ad and rated the arrogance of the advertisement. Results of moderation analysis via PROCESS Model 1 (Hayes 2013) showed a significant interaction effect of relationship length x ad type (β = -.40, t = -3.26, p = .001). Conditional effects of the predictor at different levels of moderator revealed a significant effect of relationship length on ad attitudes for the arrogant ad (β = -.32, t = -3.29, p = .001) but not for the control ad (β = .08, t = 1.07, p = .29). Furthermore, floodlight analysis (Spiller et al. 2013) revealed that for individuals not in a relationship or those in a relationship for .15 years or less (approximately two months; -1.42 SD below the mean, 45.14% of respondents), individuals were significantly more favorable toward the arrogant ad relative to the control ad.

In Study 2, 188 individuals (46.5% female, M_{age} = 23.8) from Amazon Mturk were randomly assigned to a single-factor (ad type: arrogant vs. control) between-subjects design. Participants were asked to indicate whether they are engaging in any behavior to attract a new romantic partner such as attending meet-ups, exercising more, and/or asking for help from friends. 76 participants (38.3%) reported that they are currently trying to attract a new partner, while 122 participants (61.6%) reported that they are not. Next, participants were shown one of two print ads for Porsche taken from previous advertising campaigns and asked to provide their attitudes. Results of an ANOVA revealed significant interaction of motive and ad type ad attitudes (F(1, 194) = 9.30, p = .003). Pairwise comparisons revealed that individuals with a relationship formation motive rated the arrogant ad more favorably (M = 5.16) than individuals in the control condition (M = 4.54, 95% CI [.02, 1.22], p = .042). Additionally, the arrogant ad was rated more favorably relative to the control ad (M = 4.36) for individuals with a formation motive (95% CI [.15, 1.48], p = .016).

In Study 3, 236 undergraduate students (61.0% female, M_{age} = 22.2) were randomly assigned to a 2 (motive: formation or control) x 2 (ad type: arrogant or control) between-subjects design. At the beginning of the survey, participants completed a writing scenario to prime relationship motives. After completing the writing task, participants evaluated a deodorant advertisement with an arrogant slogan ("You know that it's not a Secret…We are the best!") or a control slogan ("New scents available"). Then, participants provided their attitudes toward to the product (α = .94). Results of an ANOVA showed a significant motive x ad type interaction F(1, 232) = 8.86, p = .003. Pairwise comparisons revealed that individuals with a relationship formation motive rated the arrogant ad more favorably (M = 3.70) than individuals in the control condition (M = 3.08, 95% CI [.13, 1.11], p = .014). Additionally, the arrogant ad was rated more favorably relative to the control ad (M = 3.17) for individuals with the relationship formation motive (95% CI [.03, 1.03], p = .038).

In Study 4a, 135 undergraduate students (58.5% female, M_{age} = 21.8) were randomly assigned to a single-factor (motive: formation or control) between-subjects design. After priming relationship motives, participants evaluated the same arrogant deodorant ad from study 3 and completed five items assessing their beliefs in the importance of self-promotion adapted from Bolino and Turnley (1999). Results of mediation analysis using PROCESS Model 4 (Hayes 2013) showed that the indirect effect of relationship motive on purchase intentions through the beliefs in self-promotion was significant (Effect = .2107, 95% CI [.0343 to .4456]). Furthermore, the direct effect of relationship motive on purchase intentions became non-significant when beliefs in self-promotion were included in the model (Effect = .3580, 95% CI [-.1766 to .8927]). Study 4b replicated the results of study 4a with an older population (Amazon Mturk; 48.6% female, M_{age} = 33.8) and for a different product (watch).

Studies 5 and 6 tested for boundary conditions and results revealed that arrogance only enhanced consumer attitudes when product use was perceived to enhance one's image and when the brand was perceived to be a luxury brand.

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Philosophy of Sufficiency Economy: The Sustainable Living

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EXTENDED ABSTRACT

Previous research on globalization proposes that globalization is an antecedent to trade imbalances, income inequality, and the deterioration of natural resources among countries (Antràs, de Gortari, and Itskhoki, 2017; Epifani and Gancia, 2017). This is because manufacturers try to maximize their profits and utilize the interconnectedness of globalization to reduce their manufacturing costs. The reduction of their costs mainly comes from the exploitation of natural resources of less economically developed countries. As a result, people in such countries are gradually exposed to environmental degradation. In order to alleviate these effects, some economists have suggested the Philosophy of Sufficiency Economy (PSE) as one of the solutions that may help communities and countries to solve such encountered problems occurred from the result of globalization (Tangvitoontham et al. , 2015).

PSE was initiated by His Majesty the King Bhumibol Adulyadej of Thailand (Rama IX: 1927-2016) in 1974 to prompt an awareness of the detrimental effect of globalization and modernization. The objective of this philosophy is to develop the foundation of self-reliance to establish a sustainable living and economic development in Thai society. Therefore, to efficiently acquire a sustainable living, PSE proposes that the population at all levels (i.e., individuals, family, community, and nation) should balance their ways of living based on patience, perseverance, diligence, wisdom, and prudence to cope with the forces of globalization (Wibulswasdi, Piboolsravut, and Pootrakool, 2011). The interconnectedness principles of PSE consist of moderation, reasonableness, self-immunity, along with the two basic conditions (i.e., knowledge and morality) (Chaipattana, 2017; Mongsawad, 2010; Sornsri, 2016).

Since the purpose of implementing PSE is to provide individuals with the principle of sustainable living in the modernized and globalized market condition, the purposes of this article are to examine how PSE was initially developed in Thailand, and its influences and challenges regarding its implementation to the individual's daily activities.

Issues of globalization

Globalization is defined as the increment of economic interconnectedness, the reduction of trade restrictions, and the intensification of social relations between countries (Giddens, 2007; Reese, Rosenmann, and McGarty, 2015). Globalization also generates a double-edged effect on global inequality and poverty. On the one hand, it can help alleviate global inequality and poverty among countries (Bourguignon, 2016) through the increase of international trade and diminution of trade restrictions. On the other hand, globalization can expand an inequality within the individual country (Antràs et al., 2017).

Thailand, one of the less economically developed countries, also experienced the unfavorable impact of globalization due to the condemnation of its economic development plan on an industrial development launched in 1961.

The effects of globalization on the Thai economy: The case of the 1997 East Asian crisis

The transformation of Thai economic to liberalized economy exposed Thai people and businesses to market globalization, increasing economic vulnerability. Previous research on globalization has proposed Thai economic transformation as one of the potential causes of the 1997 East Asian crisis (Erturk, 2001; Smith, 2005).

The 1997 East Asian crisis was initiated by *first*, an aggravation of Thailand import-export growth, and an inefficiency of the exchange rate system monitored by the Bank of Thailand (Régnier, 2017). The *second* factor was excessive international and foreign direct investment, especially in the real-estate sector (Durham, 2007). To ameliorate the impact of the crisis, the Thai government espoused the financial support from the International Monetary Fund (IMF). However, the IMF policies failed to acknowledge the sophistication regarding the nature of Thailand economic condition. As a result, the Thai population of all levels had been affected by this economic recession.

The concept and implementation of Philosophy of Sufficiency Economy to achieve sustainable living

The goal of PSE is to generate the self-realization, resilient, and sustainable development to effectively and efficiently handle the challenges, result from globalization and other related alterations (Chaipattana, 2017). PSE consists of three intertwined principles of PSE (i.e., moderation, reasonableness, and self-immunity), together with two basic conditions (i.e., knowledge and morality) as shown in *figure 1*.

Moderation exhibits a sufficient way of living through simplicity while acknowledging an individual's capabilities. **Reasonableness** indicates the rational decision-making that reflects the consideration of all possible outcomes and other related factors based on an individual's analytical ability and empathy. **Self-immunity** refers to the individual's ability to protect themselves against any risks resulting from internal and external environmental factors.

To effectively implement the mentioned principles, two basic conditions should be applied. **Knowledge** includes accumulated insights, information, experiences, and analytical ability. **Morality** reflects integrity, ethical behavior, honesty, and perseverance of an individual's way of life.

Therefore, individuals can embrace PSE to their daily activities to enhance their conscience, results in a moderate "way of life." Upon reflection, the main consideration point of PSE is to enhance individual awareness in terms of self-realization. This can be applied through the scrutinized evaluation of daily consumptions in order to alleviate any unnecessary consumption.

Challenges of implementing Philosophy of Sufficiency Economy

Several challenges arise from the implementation of this philosophy. *First*, there is a misconception between PSE and self-efficiency. PSE recognizes the importance of exchange and cooperation among individuals, which leads to gradual development, while self-efficiency emphasizes that sufficiency relies on the individual's competency with minimal assistance from external factors. The *second* misconception of PSE is the anti-globalization. PSE suggests that to effectively respond to globalization, local foundation (e.g., individual, community, and nation) must efficiently developed through the utilization of its resources and abilities to enhance the level of competitiveness. Once these developments have been achieved, the country can expose its economy to globalization at its appropriate pace based on its state of readiness. *Finally*, the prominent outcomes of implementing PSE are still questionable. This is because Thailand (the originated country) is still experiencing political and economic instability, poverty, and the degradation of natural resources.

Advances in Consumer Research
Volume 47, ©2019

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Conclusion

The Philosophy of Sufficiency Economy highlights the foundation building, enhancing immunities, and resilience in a globalized economic condition with the objectives of generating the self-realization, resilient, and sustainable development to efficiently handle the challenges, result from globalization and other related alterations. Individuals who implement PSE to their daily activities can enhance their conscience, resulting in a moderate and appropriate "way of life," as well as strengthen their ability to protect and defend themselves from any uncontrollable or unexpected factors that associated with globalization.

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Today is Just Not My Day: Bad Luck's Effect on Goal Pursuit

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EXTENDED ABSTRACT

Consumers occasionally experience unlucky day in their daily life (i.e. Friday the 13th). The perception of having bad luck on these unlucky days has been shown to have a pervasive effect on consumer motivation. For instance, many consumers refuse to travel or to even leave their homes on Friday the 13th (Fidrmuc and Tena 2015). It is estimated that this lack of activity among consumers results in up to $900 million lost in business sales and productivity (Davidson 2017). Why does this unlucky day seem to demotivate consumers despite having no normative relevance to their behavior?

The purpose of the current research is to examine the possibility that unluckiness could have a carryover influence on other aspects of consumer behavior (i.e., incidental luck). Specifically, we examine how luck might influence consumer goal pursuit. We hypothesize that incidental unluckiness will temporarily paralyze consumer goal pursuit. Furthermore, we predict that this effect occurs because unluckiness alters people's self-perceptions, which people use as an input to goal pursuit (Bandura and Schunk 1981). When people experience unluckiness, we expect that they will see themselves as less effective at successfully carrying out behaviors that can bring about positive outcomes (i.e., self-efficacy), which subsequently decreases the motivation for goal pursuit.

Experiment 1a sought to provide evidence that perceptions of luck impact global goal commitment. After reported 5 ongoing chronic goals, participants were told to participate in a card game to test how lucky they were and this game served as our luck manipulation. In the card game, they have to guess the color of a face-down card. Afterwards, participants reported their commitment to their goals. An independent-samples t-test showed that those in the bad luck condition ($M = 7.28$, $SD = 1.35$) reported lower goal commitment than those in the good luck condition ($M = 7.82$, $SD = .87$) ($t(94) = -2.31$, $p < .05$).

Experiment 1b tested the extent to which this effect held for novel goals. Following the luck manipulation, participants were told to participate an advertisement rating competition. Critically, if they won the competition, they would be entered into a gift card raffle. An independent-samples t-test revealed that those in the bad luck condition ($M = 10.26$, $SD = 10.99$) rated less advertisements than did those in the good luck condition ($M = 16.27$, $SD = 18.35$) ($t(123) = -2.20$, $p < .05$).

Experiment 1c tested the direction of this effect. We expected this effect is from decrease goal commitment of bad luck. This argument stems from research showing that people generally view themselves in a positive light (Dunning and Cohen 1992). To test our directionality hypothesis, we also included a control condition. Participants competed in a word scramble task. Goal commitment was assessed by the amount of time individuals' persisted on the task. An one-way ANOVA revealed a significant main effect ($F(2,238) = 3.39$, $p < .05$). In particular, those in the bad luck condition ($M =83.02$, $SD = 50.26$) persisted less than those in the good luck condition ($M =109.07$, $SD =73.62$) ($t(157) = -2.61$, $p < .05$) whereas those in the good luck condition did not vary from the perceptions of those in the control condition ($M = 101.46$, $SD = 68.71$) ($F < 1$).

Experiment 2 tested our proposition of self-perception mechanism. Participants are dieters who are trying to lose weight. After luck manipulation, participants indicated their goal commitment about dieting goals. Afterwards, they were asked to fill out self-efficacy scale (Chen, Gully, and Eden, 2001), a scale that taps into individuals' self-perception to bring out positive outcome in general. Participants then were asked to report their effort investment toward the dieting goal. We tested the serial mediation model of the prime on goal commitment through self-efficacy and effort investment (Model 6; Hayes, 2013). The pathway from prime to performance through self-efficacy and effort investment was significant (indirect effect = -.43; 95% CI:-1.10 to -.11).

Experiment 3 tested the moderating role of free will belief on goal paralysis effect. Participants were reported their five chronic goals that they are pursuing (same task as study 1a), and engage the luck manipulation as previous study. Afterwards, they were asked to participate a pretest for other study, which was actually our free will belief manipulation. In the manipulation, they read statement about high or low free will belief, and wrote a paragraph to support the idea (Vohs and Schooler, 2008). After the manipulation, they were asked to report commitment about five goals they reported. A two-way ANOVA revealed a luck X free will belief interaction, $F(1,197) = 10.81$, $p < .001$. Those who perceived themselves as having low in free will reported lower goal commitment in the bad luck (versus good luck) condition $t(94) = -2.28$, $P = .025$.

Experiment 4 tested if the effect could be attenuated by raising the goal attainability. When attainability is high, experiencing bad luck should not decrease consumers' motivation to put effort. Participants were asked to engage a luck manipulation and task as study 1c. In addition, attainability was manipulated by providing different instructions. Participants were told their goal was achieved by 85% (15% in the low condition) participants in the high attainability condition. A two-way ANOVA revealed a significant luck × goal attainability interaction on goal commitment ($F(2,254) = 3.13$, $p < .05$). Those in the low goal attainability condition reported significantly less goal commitment in the bad luck (versus good luck) condition ($t(84) = -2.93$, $p < .001$). On the other hand, there was no effect of luck on goal commitment for participants who were in the high goal attainability condition ($t(86) = .95$, $p = .ns$). Neither main effect was significant ($Fs < 1$).

These findings offer evidence of how incidental luck could influence on goal pursuit. Specifically, we proves that this effect is due to individuals' change in self-perception. This current paper not only offers a new ubiquitous variable (luck) could impact on goal commitment but also shows an effect that global goal system could be temporary paralyzed.

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The Downside of Product Bundle Customization

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EXTENDED ABSTRACT

Product bundles come in various forms in our daily marketplace (Harlam et al. 1995; Popkowski-Leszczyc and Häubl 2010). Typically, product bundles are preassembled by manufacturers and retailers. Recently, companies have started offering self-customized bundles, so now consumers can pick and combine different products to build their own (e.g., Birchbox's customizable cosmetics bundle and Nintendo's customizable game bundle). Given that customization is a relatively new practice for marketing product bundles, no research has examined how consumers respond to self-customized bundles. To fill this gap, the current research investigates when and how customization affects consumers' evaluation of bundles.

Prior research suggests that consumers favor customized single-item products (e.g., Nike ID sneakers) more than the products premade by companies because consumers design products that better meet their preferences (Franke and Piller 2004; Schreier 2006), allow them to express their identities (Kim and Drolet, 2003, 2007; Kraiser, Schreier, and Janiszewaski 2017), and also because customers intrinsically enjoy the customization process (Buechel and Janiszewski 2010). In contrast to these findings, when it comes to bundles, we propose that customization can actually backfire. In fact, we find that consumers evaluate customized bundles less favorably than store-generated bundles.

We propose that the negative effect of bundle customization occurs because of two expectations that are triggered by product bundles. First, consumers expect a bundle to reflect an ideal combination of products. This expectation is based on prior research that suggests that consumers process a bundle as a single gestalt unit (Shaddy and Fishbach 2018) and think of the parts in terms of how well they go together in the whole (Evers, Inbar, and Zeelenberg 2014; Koffka 1935). Accordingly, when consumers select multiple products to form a bundle as opposed to purchasing them separately, consumers focus on the synergy between the products, which makes the selection task more complex. Indeed, in our first pilot study ($n = 118$), when participants selected two different health supplements from a choice set to customize a bundle (vs. to purchase them separately), participants found the selection task to be more difficult and were less confident about their decisions.

When people face difficult decisions, prior literature suggests that people tend to delegate those decisions to others (Botti, Orfali, and Iyengar 2009; Steffel and Williams 2018). Furthermore, research on crowdsourcing implies that sometimes consumers prefer products designed by companies over products they design themselves (Fuchs et al. 2013) because for certain product categories, consumers assume that companies know how to come up with better products. Taking these findings together, the second expectation triggered by bundles suggests that consumers expect companies to know better how to assemble bundles from products that work well together. Corresponding to this expectation, the results from two pilot studies ($n = 230$ and $n = 388$) revealed that when a store offered multiple health supplements as a single bundle (vs. separate standalone products), participants were more likely to infer that the store offered those products because they go well together.

Given that these expectations hold true, we tested the negative effect of bundle customization across four studies. In study 1 ($n = 306$), we examined whether bundling impacts consumers' decision to customize in the first place. We gave participants an opportunity to select health supplements to either customize a bundle or purchase them separately, then we measured whether they would like to delegate the selection decision to the store. Because figuring out which products go well together was deemed difficult, participants were more likely to defer the decision when they had to select products to customize a bundle than to purchase them separately. We also tested the moderating role of consumers' knowledge. If consumers are highly knowledgeable about a product category, then they would know which products to select. Thus, among highly knowledgeable consumers, the proposed effect would be attenuated. Consistent with our theorizing, the results revealed that while participants with low knowledge were more likely to delegate the decision to the store when they had to select products to form a bundle (vs. purchase them separately), this effect disappeared among participants with high knowledge.

In study 2 ($n = 722$), we tested the phenomenon using evaluative measures instead of choice. We presented participants with a bundle of two different health supplements (labeled "health supplement bundle") that was created either by a store or by participants themselves. As a baseline condition, we included a separate condition in which the same products were recommended by the store (signaled with a "Store's Pick" tag on each item) or chosen by participants separately, not as a bundle. We then measured participants' perceived complementarity and perceived effectiveness of the products. Participants in the bundle condition reported that products seemed to complement each other better and seemed more effective at improving their health when the bundle was created by the store than by themselves. However, when the products were not bundled, participants indicated the products seemed more complementary and more effective when the participant chose the products than when the store did, consistent with literature on freedom of choice and reactance theory (Fitzsimons and Lehmann 2004). We further showed that these effects were prominent among maximizers who were striving for the ideal bundle and were not settling for second best. However, among satisficers who were not necessarily striving for the ideal bundle and were satisfied with sub-optimal options, these effects were not evident.

In study 3 ($n = 221$), we replicated the findings from study 2 using a different product category: chips and salsa. Finally, in study 4 ($n = 455$), we provided converging evidence for the proposed mechanism by testing the moderating effect of required synergy. Consumers find the bundle customization task to be difficult because they do not know which products go well together, but they do expect companies to know. These assumptions apply to bundles where the synergy between the bundled items is important when consuming the entire bundle (e.g., wine and cheese bundle). When synergy is less important (e.g., pasta and cheese bundle), figuring out which products go well together is no longer an issue, and we would find the proposed effect diminished. Our results revealed that participants found bundled wine and cheese to be more complementary and more enjoyable to consume together when the bundle was created by a store than by participants themselves. These differences, however, were not evident in a bundle of pasta and cheese.

Theoretically, our findings extend prior work on bundling by showing that product bundles implicitly trigger certain expectations. These expectations, in turn, predict a boundary condition in

customization literature: customization can backfire in the context of product bundles. From a practical perspective, our research offers strategic insights on offering customizable product bundles.

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Parts in the Whole:
Compensation versus Spillover Effects in Judgments of Bundled Products

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EXTENDED ABSTRACT

The ubiquity of product bundles in the marketplace has yielded a substantial amount of research on how consumers evaluate product bundles as a whole (Adams and Yellen 1976; Bakos and Brynjolfsson 1999). However, relatively little attention has been paid to how consumers assess the parts in the whole—that is, the component products in the bundle. Research in this domain implies that consumers' valuation of one bundled product spills over onto their valuation of the other bundled product. Accordingly, researchers often suggest that firms be cautious about bundling one product with another objectively inferior one (Popkowski-Leszczyc et al. 2007; Yadav 1994). We challenge this proposition by documenting a novel case where bundling a *substitute* product with another inferior *substitute* may not hurt companies but help them.

We propose that a product is evaluated *more* favorably when it is bundled (vs. not bundled) with an inferior substitute product. We further show that this effect is driven by consumers' trust in the market, which stems from the belief that firms supply offers that meet consumers' expectations to survive in a competitive market (Schrift, Kivetz, and Netzer 2016). Thus, consumers trust companies to deliver a reasonable standard of value with their offerings, leading them to believe that if an offer is inferior in a particular attribute, it must excel in some other attributes (Chernev, 2007; Chernev and Carpenter 2001). Because consumers perceive a bundle of products as a single offer, if one does not work, consumers may infer that the other should work for the entire bundle to be minimally functional. Nonetheless, consumers may not rely on this belief when making inferences about bundled complements; if one is considered ineffective, it is futile to believe that another is effective because a bundle cannot serve its function without all its components. We tested our hypothesis across four studies.

In Study 1 (n =406), we provide initial evidence for the differential effect of bundling substitute versus complementary products using a 2 (bundling: bundled vs. separate) X 2 (product type: substitutes vs. complements) between-subjects design. Participants were given a shopping list containing vitamin B2 (B2 henceforth), niacin, and other filler products. Participants in the bundled condition saw B2 and niacin packaged together as a bundle, while those in the separate condition saw the products separately. We informed participants that both products boost energy and combat fatigue and that they should take either one (substitutes) or both (complements) for maximum effect. We stated that B2 received an effectiveness rating of 1/7 but the effectiveness rating of niacin was not available and asked participants to estimate it.

A significant two-way interaction revealed that when B2 and niacin were substitutes, participants found niacin to be more effective when it was bundled with B2 than when it was not. In contrast, when the products were complements, participants reported niacin to be less effective when it was bundled with B2 than when it was not.

Our proposition hinges on the premise that consumers trust companies to provide bundles of reasonable standard value. Thus, if one of the bundled substitutes meets that standard, consumers do not have to believe that the other substitute would also work. Consequently, they would infer the unknown substitute to be inferior than the known effective substitute. To test this, in Study 2 (n = 456),

we used a 2 (bundling: bundled vs. separate) X 3 (effectiveness of known substitute: ineffective vs. effective vs. not given) between-subjects design. We used the same products but framed B2 and niacin as substitutes. Participants in the ineffective and effective conditions were informed that B2 received an effectiveness rating of 1/7 and 7/7, respectively. Participants in the control condition were not given any information about B2. Next, participants saw niacin either by itself or bundled with B2. We told them that the effectiveness rating of niacin was not available and asked them to estimate it. As expected, niacin was rated less effective when it was bundled with B2 than when it was not. Yet when B2 was less effective, niacin was rated more effective when it was bundled with B2 than when it was not. Finally, in the control condition, no difference was observed.

In Study 3 (n = 320), we directly examined the role of trust in the market (TIM) as our underlying process. Participants were randomly assigned to either bundled or separate condition and saw two substitutes: niacin and B2. This time, participants were told that niacin was ineffective and to rate the effectiveness of B2. Subsequently, participants filled out a TIM scale (α = .80), which included items such as "Companies offer products that are reliable and appealing to consumers" and "I believe that products offered in the marketplace are effective." Consistent with previous studies' results, participants found B2 to be more effective when offered bundled than separately. A significant TIM x bundling interaction revealed that participants with high TIM perceived B2 to be more effective when bundled than when not. Among participants with low TIM, however, this difference was not evident.

Providing convergent evidence for the TIM account, in Study 4 (n = 422), we directly manipulated TIM by varying the trustworthiness of a retail store. In this 2 (bundling: bundled vs. separate) X 2 (store: high-trust vs. low-trust) between-subjects design, niacin and B2 were offered by a store considered either highly trustworthy or relatively less trustworthy. When the substitutes were sold at a highly trusted store, participants perceived B2 to be more effective when it was bundled with the ineffective niacin than when it was not. In contrast, when a less trusted store offered the products, participants perceived B2 to be less effective when it was bundled than when not.

Our findings indicate that bundling a product with another inferior product may not necessarily hurt firms but help them. We further document the critical role of consumer trust in explaining our findings. In so doing, the current research makes important theoretical contributions to the extant literature on bundling and trust. From a practical perspective, our research offers strategic insights on product bundle configurations.

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Consumer Engagement after Moral Transgressions

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EXTENDED ABSTRACT

Consumer engagement is directly related to company performance and brand loyalty (Islam & Rahman, 2016; Bolton, 2011). Whereas much research focuses on its external determinants such as online brand communities (Brodie et al., 2013), our work examines how consumers' own moral transgressions influence their subsequent purchasing engagement, which we define as the intensity of consumers' engaging behaviors in the purchasing process.

Prior literature shows that moral transgressions lead to negative outcomes such as negative emotions (Levav & McGraw, 2009). When consumers face such negative events, they may distract themselves from unwanted thoughts and feelings (Boden & Baumeister, 1997; Rusting & Nolen-Hoeksema, 1998). One way of distraction is to engage in activities unrelated to the events (Duhachek, 2005). Therefore, we suggest that after moral transgressions, consumers engage more in the purchasing process to distract themselves.

However, not all consumers engage more in the purchasing process after moral transgressions. We expect that the effect of moral transgressions on consumer engagement happens only when consumers are highly self-conscious. Self-consciousness is the tendency of a person to direct attention inwardly (Fenigstein, Scheier, & Buss, 1975). It can be activated by cues in consumption processes, such as being called by name (Tuan Pham et al., 2010) or the presence of mirrors or cameras in the immediate surroundings (Brockner, 1979). When consumers are self-conscious, they focus more on their motives, inner feelings, and thoughts (Plant & Ryan, 1985), so it is harder for them to remove their minds from their moral transgressions and the negative emotions. Hence, we predict that the effect of moral transgressions on consumer engagement exists only when consumers are highly self-conscious, because these consumers are more likely to adopt purchasing engagement as a distraction.

We report four studies, where consumer engagement was operationalized with engagement intention (studies 1 and 2), actual engagement time (study 3), and the enjoyment in the purchasing process (study 4).

In study 1 ($N = 152$), we manipulated moral transgression (*yes vs. no*) and measured self-consciousness (Fenigstein, Scheier, and Buss 1975). In the immoral (moral) condition, participants imagined obtaining a $100 tip by secretly taking the tip without splitting it with a coworker (by splitting the tip with a coworker equally). Next, in an unrelated product evaluation task, participants indicated their intention to search for and share information about a storage container. The predicted interaction was significant ($B = -.48$; $t = -2.00$, $p < .05$). Highly self-conscious participants had a greater intention search for and share information ($B = -.46$; $t = -2.68$, $p < .01$) after moral transgression than no transgression. However, the effect disappeared for low self-conscious participants ($p > .8$).

Study 2 (N = 272) employed a three-factor design. Moral transgression (*yes vs. no*) and benefit amount (*small vs. large*) were manipulated between subjects; self-consciousness was measured. Participants imagined that a cashier accidentally forgot to scan a pair of pants when they were checking out in a mall. In the immoral (moral) condition, they did not tell the cashier about the unpaid pants (they told the cashier about the pants, and the store manager gave them the pants for free). Engagement intention was measured with the same items as study 1. The results showed an interaction moral transgres-

sion and self-consciousness on engagement intentions ($B = -.34$; $t = -2.57$, $p < .05$). No other interaction effect was found ($ps > .2$), suggesting that the predicted effect is not restricted to certain amounts of monetary benefit. For participants high in self-consciousness (+1 SD), moral transgression (vs. no transgression) led to a greater intention to engage in the purchasing process ($B = -.20$; $t = -2.06$, $p < .05$). However, the effect disappeared for consumers low in self-consciousness (-1 SD) ($p > .1$).

In study 3 ($N = 149$), we further examined consumers' actual engagement by measuring their engagement time. We measured self-consciousness and manipulated moral transgression as in study 2. Then we showed participants a laptop with information links. The dependent variable was the time they spent viewing information and evaluating the laptop. The predicted interaction ($B = -17.52$; $t = -2.14$, $p < .05$) revealed that highly self-conscious participants spent more time evaluating the laptop after moral transgressions (vs. non transgression) ($B = -15.02$; $t = -2.7$, $p < .01$). The effect did not hold for low self-conscious participants ($p > .7$). To further test our theory of distraction, we measured participants' distraction tendency and found an interaction effect of moral transgression and self-consciousness on distraction tendency ($B = -.52$; $t = -2.55$, $p < .02$). Participants high in self-consciousness had a higher distraction tendency after moral transgressions (vs. no transgression) ($B = -.49$; $t = -3.53$, $p < .001$). However, the effect disappeared when participants were low in self-consciousness ($p > .9$).

Study 4 (N = 208) investigated consumers' engagement in a broader sense—their enjoyment in the purchasing process. We employed a 2 (moral transgression: yes vs. no) × 2 (consciousness: yes vs. no) between-subjects design. We manipulated self-consciousness with a writing task to show the effect of temporally induced self-consciousness. Moral transgression was manipulated as in study 1. Next, participants viewed information on three products and rated how enjoyable the experience was on a 7-point scale. The results revealed a significant interaction ($F (1, 204) = 9.00$, $p < .01$). In high self-consciousness conditions, participants enjoyed the engaging process more after moral transgression (vs. no transgression) ($M_{transgression} = 4.49$ vs. $M_{no\ transgression} = 3.98$; $t = 1.88$, $p < .06$). However, in low self-consciousness conditions, participants enjoyed the engaging process more when they did not commit moral transgression than when they did ($M_{transgression} = 3.64$ vs. $M_{no\ transgression} = 4.72$; $t = -2.38$, $p < .02$).

This research provides insight into the nuance of how moral transgressions and self-consciousness jointly affect consumer engagement. We show that after moral transgressions, high (vs. low) self-conscious consumers engage more intensively in the purchasing process. Our findings contribute to the understanding of consumer engagement, downstream impacts of moral transgressions, and self-consciousness.

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The Mixed Impacts of Nostalgia on Consumer Switching Behavior

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EXTENDED ABSTRACT

Both conventional wisdom and past psychological research suggest that nostalgia can induce longing for the past, making consumers prefer products that are reminiscent of the "old days" (Holbrook 1993; Holbrook and Schindler 1994). Our present investigation explores whether this wistful longing for the past has effects beyond preference for nostalgic products and carries broader implications for choices not directly linked with one's past. Specifically, we study whether nostalgic feelings might affect consumers' switching behavior.

Existing literature suggests that nostalgia can also induce two divergent motivations—savoring motivation and approach motivation. These two motivations bear opposite implications regarding how nostalgia may influence consumer switching behavior.

People experience feelings of nostalgia when they reminisce about positive events in the past that are unlikely to reoccur. The non-repeatability of a nostalgic event can lead to the motivation to savor it (Huang, Huang, and Wyer 2016). When people savor an experience, they become more patient and tend to take their time in enjoying it. Nostalgic experiences are highly pleasant yet are also unlikely to be re-experienced. For that reason, people are highly motivated to prolong the time they spend reminiscing about the nostalgic experience, which generalizes to other unrelated consumption experiences (Huang et al. 2016). If nostalgic consumers savor an experience to postpone being unable to re-experience it, it seems possible that these consumers will become less likely to let go of the incumbent option and switch to a new one. In other words, it seems that nostalgic consumers should be more loyal to their current brand or product option (the "loyal customer hypothesis").

Another motivation that can be induced by the feelings of nostalgia is approach motivation (Stephan et al. 2014). Although nostalgia is pertinent to the past, it empowers people to look forward and take proactive actions. When people experience nostalgia, they often recall glorified past events in which they were the main character (Wildschut et al. 2006). Thus, people can draw on these nostalgic experiences to enhance positive self-views and consequently boost their self-esteem (Stephan et al. 2015). When people have high evaluations about themselves, the approach orientation is likely to be promoted (e.g., Bandura 1982; Cavallo, Fitzsimons, and Holmes 2009). Given that approach motivation reflects a motivation for general action and stimulates the pursuit of action-related behavior (Albarracín et al. 2008; Harmon-Jones 2003), it is not surprising that people with high approach motivation are predisposed to make changes and switches (Kuhl 1985; 2000). Hence, nostalgia may also induce more switching behavior (the "fickle customer hypothesis").

A follow-up question is when nostalgic consumers would become more (vs. less) likely to engage in switching behavior. We propose that the answer to this question depends on consumers' consumption focus. While an outcome focus leads people to focus on the end outcomes of consumption, a process focus directs consumers' attention to the experiential aspect (Escalas and Luce 2004; Thompson, Hamilton, and Petrova 2009). To this extent, the relative impact of the mixed motivations (i.e., approach motivation and savoring motivation) induced by nostalgia may differ as a function of consumption focus. When consumers face different options they could choose, they may focus on the outcomes of their decisions without thinking much about the consumption experience. However, as savoring involves slowing down the consumption process to fully experience it, and as the target of savoring is generally experiential processes of consumption (e.g., Bryant 2003; Huang et al. 2016), the savoring motivation induced by nostalgia would be particularly relevant when nostalgic consumers are led to focus on the process of consumption. In that situation, nostalgic consumers consequently will become less likely to engage in switching behavior.

We conducted three studies to test our predictions. Study 1 tested whether nostalgic feelings induced by music (Barrett et al. 2010; Schindler and Holbrook 2003) would lead to more or less real consumer switching behavior. Participants were first given a pen from the brand Pilot or a similar pen from the brand Zebra to complete the questionnaire for a music evaluation task, in which they listened to *Yesterday Once More* by the Carpenters (*nostalgia* condition) and *Million Reasons* by Lady Gaga (*baseline* condition) and reported their thoughts and feelings about the song. At the end of the study, they were told that they could take away the pen they had been using and another pen was also available for them to choose. It was observed that participants who had listened to nostalgic music (49.3%) were more likely to switch their real choice of pen than baseline (30.7%; *p* = .021).

We next conducted study 2 with a well-established manipulation of nostalgia that provides better experimental control. Participants first received a free coaster as a token of appreciation for their participation. Next, they were asked to write about a nostalgic experience or an ordinary experience (Wildschut et al. 2006). At the end of the study, participants were presented with a new cup coaster and asked whether they would like to switch to this newly presented coaster. It was observed that thinking about a nostalgic experience (vs. an ordinary experience) increased the likelihood that participants would switch to a new gift option (50.0% vs. 27.6%; *p* = .016).

Study 3 tested the crucial moderating effect of consumption focus. Participants first chose from two herbal drinks as a gift for their participation, and were asked to think about what end benefits they could gain from drinking it (*outcome focus* condition) or how they would feel as they drink it (*process focus* condition; Escalas and Luce 2004). They then completed the same nostalgia manipulation in study 2. Finally, they were informed that another herbal drink was available for them to choose. The participants thus had an opportunity to switch to the newly available herbal drink. When consumers focused on the consumption *outcome*, nostalgia (57.1%) led to more switching behavior than baseline (36.7%; *p* = .028). When they focused on the *process* of consuming the products, however, nostalgia (23.8%) marginally decreased switching behavior compared to baseline (40.4%; *p* = .057; interaction effect: *p* = .004).

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Get Away! The Effects of Pest Anthropomorphism on Consumer Willingness to Purchase Healthcare Products

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EXTENDED ABSTRACT

More and more brands use pest anthropomorphism in their advertisements. Anthropomorphized pests, which we formally define as pathogens, germs, insects, bacteria, or vermin that can directly or indirectly harm people's physical or mental health, are imbued with humanlike characteristics. While many previous studies have investigated how the anthropomorphizing of brands and products affect preference and evaluations (Aggarwal and McGill, 2007; Kim and McGill, 2011; Zhou, Kim, and Wang, 2018), the effects of pest anthropomorphism on consumer responses remain unclear. In the current research, we tried to fill this gap by examining the effects of pest anthropomorphism on consumer's willingness to purchase healthcare products. The use of pest anthropomorphism for a pest in the healthcare product promotion setting is distinct from past research due to the repulsive nature of the anthropomorphized entity: it elicits a different level of disease-related emotions (specifically disgust) and an aversion response. We propose that portraying pests with humanlike faces may cause consumers to shift the category of evaluation from pest to particular human stereotypical categories such as villains (Epley, Waytz, and Cacioppo, 2007).

Unlike previous studies which explored how consumers respond to positively or negatively anthropomorphized facial features, in this research we focus on anthropomorphic faces with two basic negative emotional expressions, "aggressive face" and "crying face", and how these faces are perceived, which may subsequently influence consumers' willingness to buy a healthcare product. We expect that an aggressive face could evoke the villain schema, enhance perceived threat, lead to willingness to purchase the product as a weapon to protect themselves. In contrast, we expect that the illustration of pests with a humanlike crying face will attenuate the effect of pest anthropomorphism on defensive reactions. When a pest is portrayed with a crying face, this may shift the category of evaluation from pest to some specific human category such as that of victim, consequently leading to a lower level of threat perception and defensive reaction. That is, the crying face will diminish the pest anthropomorphism's effect. We also expect that threat perceptions mediate the interaction effect between pest anthropomorphism and pest type on purchase likelihood.

However, the effect of anthropomorphism should not be homogeneous for all pests. Research on behavioral immune system suggest that different types of pests cause different levels of behavior immune response (BIR). In order to protect themselves from disease threats, human beings have learned to detect the presence of pests in the environment. This triggers the appropriate disease-relevant emotional and cognitive responses, which facilitate behavioral avoidance of pests before they come into contact with the body. Since the behavioral immune system functions by scanning disease-causing pests and activating responses aimed at diminishing those threats (Schaller and Park, 2011), for pests with high BIR, consumers actively engage in behavioral avoidance, thus, whether they are anthropomorphized or not has little impact. Therefore, pest anthropomorphism should be effective only for pests causing a low BIR.

In study 1, a total of 254 females were randomly assigned to one condition of a 3 (pest: non-anthropomorphic vs. anthropomorphic with aggressive face vs. anthropomorphic with crying face) × 2 (pest type: high vs. low in BIR) between-subjects design. They were asked to form an impression of a newly introduced brand of acne facial cleanser illustrated in an advertisement. Results a 3 × 2 ANOVA showed a significant two-way interaction effect between pest anthropomorphism and pest type on purchase likelihood. As expected, when the pest is in the low BIR conditions, the strongest purchase likelihood is for the pest endowed with an aggressive human face. There was no significant difference in purchase likelihood between the crying and non-anthropomorphized conditions. Conversely, in the high BIR conditions, there was no significant difference in purchase likelihood.

Given the null effect of crying face in study 1, study 2 focuses on the effect of aggressive face on consumer's purchase intention. The main objectives of study 2 are to replicate the main findings of study 1, and to examine the mediating role of perceived threat on the effect of pest anthropomorphism and pest type on likelihood of purchase. We recruited 147 consumers at a shopping mall in Taiwan to participate in a new packaging evaluation survey. They were randomly assigned to one condition of a 2 (pest anthropomorphism: non-anthropomorphized vs. anthropomorphized) x 2 (pest type: high vs. low in BIR) between-subject design. Results showed an expected two-way interaction between pest anthropomorphism and pest type. Planned contrasts showed that participants in the low BIR condition reported stronger willingness to buy a foot spray when they were exposed to an anthropomorphized (vs. non-anthropomorphized) pest. Conversely, participants in the high BIR condition reported insignificantly different ratings for purchase likelihood in both the anthropomorphized and non-anthropomorphized groups. Results of bootstrapping analysis confirmed the mediating role of perceived threat.

Study 3 tried to replicate the effect of pest anthropomorphism on actual behavior in a field experiment. A total of 348 participants of a large university in Taiwan enrolled in the study. Visitors exiting a university library encountered a poster display that introduced the negative consequences of particulate matter (PM2.5) on human health either in a non-anthropomorphized or an anthropomorphized version. Anti-dust face masks were the products used to protect people from PM2.5. They were placed in an acrylic pocket mounted on the poster stand so that visitors leaving the library could take one free of charge to use when going outside. A majority of visitors in the anthropomorphism condition used the mask, whereas significantly fewer visitors used it in the non-anthropomorphism condition. These results provide strong support to the effect of pest anthropomorphism on consumer's actual behavior.

The results of this research contribute to the literature in several ways. First, the downstream effects of anthropomorphism are thus extended to a new domain; not limited to the desirable anthropomorphized target. Second, our research contributes to the literature of anthropomorphism by focusing on two negative human faces (aggressive and crying) in advertising. Third, our research provide clear boundary conditions and underlying mechanism to the effect of pest anthropomorphism. Finally, designing an anthropomorphized pest illustration that activate the consumers' threat perception toward the pest could be a key point for successful healthcare product sales.

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Emoticon Effects: A Double-Edged Sword in Online Review Helpfulness

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EXTENDED ABSTRACT

Emoticons are the pictorial face-like icons used in computer-mediated communications. They can be generally grouped into positive and negative ones. Emoticons increase social presence, helps close social distance and increases intimacy (Liu, Lin, & Huang, 2012). Despite the prevalent use of emoticons in online reviews, limited studies have examined whether both positive and negative emoticons improve review helpfulness. This research draws on cognitive tuning theory (Soldat & Sinclair, 2001) and proposes a double-edged effect of emoticons on review helpfulness with two review characteristics: review valence (positive and negative) and review format (narrative- and list-based).

A narrative-based format is story-like representation and links events in a chronological order. Readers tend to use holistic information processing (Adaval, Isbell, & Wyer, 2007). In positive narrative-based reviews, the positive emotions carried by the emoticons provide hints that the story is written in a pleasant tone. For gaining enjoyable feelings, individuals will be willing to read and absorb in the story. The positive feeling enhances holistic information processing (Adaval et al., 2007). This facilitates the information processing strategy a narrative elicits. Retrieving information from memory becomes relatively easy and evaluating products becomes less effortful. Review helpfulness is thus increased.

In negative narrative-based reviews with emoticons, review recipients form a first impression that the writers express negative emotions and attempt to influence others' judgments. Readers are more alert and resist being influenced. As a result, readers are less motivated to engage in the review. Absorption in the story is less likely to happen. Furthermore, in order not to be influenced by negative emotions, readers have to exert effort to maintain their moods. The curtailed cognitive capacity will decrease the ability to identify judgmental cues. Retrieving information from memory becomes less efficient and not fluent. Negative emoticons will hinder the integration of information. Accordingly, review helpfulness is decreased.

A list-based format describes events by using a list, not necessarily following the time order of these events. The list-based information entails piecemeal information processing. Positive emoticons tend to evoke positive moods, which should elicit holistic processing (Mattila, 2000). The mismatch in processing strategies increases the difficulty of information integration. Moreover, pictures that appear in lists interfere with the integration of information (Adaval et al., 2007). Positive emoticons which act as picture-like symbols will hinder information processing when they appear in list-based reviews. Review helpfulness is thus deceased.

Review readers are not likely to associate the list-based review with its writer (Van den Hende, Dahl, Schoormans, & Snelders, 2012). Lacking association with the writers makes this type of reviews be seen as objective. As list-based reviews elicit piecemeal processing, emoticons in a list-based review will be depicted as an additional individual piece of information. In addition, negative affective cues elicit piecemeal processing (Soldat & Sinclair, 2001). This matches with the information processing style list-based reviews elicit. Review readers will perceive negative list-based reviews with emoticons as more helpful than the same reviews without emoticons.

In Study 1, four hundred and thirty participants (197 females) from Amazon Mturk attended in a 2 (emoticon presence: yes vs. no) × 2 (review valence: positive vs. negative) × 2 (format: narrative- vs. list-based) between-subjects design with a restaurant review as the test scenario. Analysis of Variance showed a significant three-way interaction. As predicted, participants reported positive narrative-based reviews with emoticons as more helpful than those who read the same reviews without emoticons. Negative narrative-based reviews with emoticons were seen as less helpful than the same reviews without emoticons. Participants rated positive list-based reviews with emoticons as less helpful than those who read the same reviews without emoticons. Negative list-based reviews with emoticons were more helpful than the same reviews without emoticons. Processing fluency was found to mediate the interactive effect of emoticon presence, review valence, and review format.

Study 2 empirically tested the predictions by using data collected from Facebook business pages. All reviews (4870 reviews) from 50 hotels from the five largest cities in the USA were used for analysis. The predictions were assessed via multilevel regression analysis in which hotels were regarded as the higher level variable (Level 2) and variables for reviews were the Level 1 variables. Manually coded emoticon presence, review valence and review format were the variables of interest while review age, review length and number of likes were control variables. The dependent variable was the rank of review helpfulness given by Facebook. A significant multilevel random coefficient of the three-way interaction was found. Simple slopes tests indicated that in the cases of positive narrative-based reviews, emoticon presence increased review helpfulness, but decreased review helpfulness when the reviews were negative. In the cases of positive list-based reviews, emoticon presence decreased review helpfulness whereas review helpfulness was increased when the reviews were negative.

This research adds insight for the cognitive tuning theory. Emoticons are found to be treated as external affective cues that have similar effects as moods or feelings. Marketers should consider the interactive effect of emoticon presence and review format when evaluating eWOM effectiveness.

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Advances in Consumer Research
Volume 47, ©2019

Artificial Intelligence as an Extended Self: Examining the Role of the "Virtual Self" on Willingness to Share Negative Word-of-Mouth Following Service Failures

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EXTENDED ABSTRACT

The services industry saw a rapid transformation led by innovating technologies such as artificial intelligence (AI), big data, machine learning and robotics (Huang and Rust 2018; Wirtz et al. 2018; Marinova et al. 2016). These smart technologies seek to provide consumers with automatic, personalized, and optimized service solutions and experiences. Despite of the growing application of AI in service encounters and significant attention from practitioners, academic research in this area is still in its infancy (Wirtz et al., 2018). The aim of this research is to address the gap by examining the role of AI in service failures.

Extant research on service failure suggests that dissatisfaction and firm-blame are found to be the key drivers of negative word-of-mouth (NWOM) sharing (Bechwati & Morrin 2003; Hennig-Thurau et al. 2004; Wetzer, Zeelenberg & Pieters 2007). These prior work, however, focus on the "dyadic, human and role-driven interactions between customers and employees" (Lariviere et al. 2018, 239). But what if the exchange is between a consumer and an AI? Today, many AI systems use prior consumer data to provide optimal solutions and suggestions that are based on the interests and preferences of each specific consumer. From this perspective, consumers might feel personally connected with the AI agent and that the AI could possibly be seen as an extension of the self (a virtual self). For example, researchers in human computer interaction have found that people perceive a AI-systems to be more like themselves when there are overlapping traits (Groom et al. 2009). When interacting with AI-systems that are similar to the self, especially in the moment of interaction, people feel like the AI is part of one's self (Takayama 2011).

In the context of a service failure, we predict this AI-self connection will act as a mediator to withhold intentions to share NWOM. Prior research in WOM, specifically impression management, suggests that consumers are more inclined to share experiences that promote self-enhancement (i.e., making oneself look smart and helping others) (Hennig-Thurau et al. 2004; Sundaram, Mitra, and Webster 1998; Berger 2014) and avoids self-implication (Philp, Pyle, and Ashworth 2018). Similarly, failures caused by an AI system that is close to the self, will not convey a positive image of the real self.

EXPERIMENT 1

198 participants were guided through a 2(Service Agent: Human vs. AI) X 2(Service Outcome: Success vs. Failure) between-subject study. Participants read a scenario about a travel experience that was designed for them by a Human Employee or an AI system (both named "The Travel Master"). The travel experience was then either a success or failure. A two-way ANOVA revealed a significant Service Agent X Service Outcome on the willingness to share NWOM ($F(1, 194) = 11.27$, p = .001). Specifically, when the service outcome was negative, participants were less likely to share NWOM when the agent was an AI compared to human employee (MAI = 4.37, MHuman = 5.20, F (1, 194) = 10.53, p =.001). No difference was found when it's a successful experience. In addition, the results showed no difference in firm-blame or felt dissatisfaction when the outcome was negative.

EXPERIMENT 2

In this experiment, we tested whether the lower intentions to share NWOM were due to the perceived connection with the AI. If consumers perceive an AI agent as an "extended self" because of the self-mirroring nature of the algorithm, an AI agent that uses other consumers' data should attenuate such effect. 205 participants were guided through a 2(Personalization: Yes vs. No) X 2(Service Outcome: Success vs. Failure) between-subject experiment. This time, consumers either interacted with a personalized AI who provides a solution based on each consumer's past behaviors and individual preferences, or with a non-personalized AI that relies on other consumers' general data.

A two-way ANOVA revealed a significant Personalization X Service Outcome on the willingness to share NWOM ($F(1, 201) = 4.19$, p = .04). Similar to the results of study 1, when the service outcome was negative, participants were less willing to share NWOM, but only when the AI robot was personalized to their interests and past behaviors, and not when the AI was based on other travelers' data (Mpersonalized-AI= 4.32, Mnon-personalized-AI = 5.21, $F(1, 201) = 14.6$, p =.001). No difference was found when it was a successful experience. In addition, neither firm-blame or felt dissatisfaction was affected by the two AI systems when the outcome was negative.

We also found that participants who used a personalized AI ($M = 3.09$) felt more connected with the AI agent than those who used a non-personalized one ($M = 2,59$, $F(1, 203) = 48.02$, p =.001). Based on 5,000 bootstrapped samples at the 95% confidence intervals, perceived connection with the AI fully mediates the effect of a personalized AI on willingness to share NWOM when the outcome was negative ($CI_{95\%}$: -.53 to -.02), but not for positive outcome ($CI_{95\%}$: -.43 to .29).

CONCLUSION

An updated view on service failures is warranted as smart technologies such as AI play an increasingly important role in the services sector. By integrating AI with service failures, this research adds to our knowledge on both fields: first, we demonstrated that AI could potentially inhibit consumers from sharing NWOM. More intriguingly, this effect occurs, despite no difference on blame and dissatisfaction directed to the firm. Second, we identified that the perception of the AI as an "extended self" explains why such effect occurs. Only when an AI algorithm mirrors consumers' personal interests and preferences are they less likely to share NWOM. Since failures caused by a "virtual self" do not convey a positive image of the "real self", consumers are more likely to withhold such experiences to themselves, despite the firm still being blamed for the failure. As AI technologies continue to advance and shape consumers' everyday consumption experiences, more research is warranted in better understanding their dual impact on consumers and the service providers. we hope our findings provide useful insight in this nascent field.

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Excitement of Rentals

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EXTENDED ABSTRACT

The rapid growth of rental services, ranging from big-ticket items such as cars and homes to less expensive products including digital books, movies, designer handbags, has spawned a term called "transumer" (transient consumer) (Trendwatching.com 2006). A typical "transumer" may get music through Spotify, movies from Netflix, transportation through Uber, and the entire closet from Rent the Runway. They tend to not buy but rent everything. The new spending habit has crafted numerous opportunities for sharing economies. In the U.S. alone, revenues of rental services have grown by 55% over the past 15 years (US Census Bureau, 2014). Different from buying, renting does not elicit ownership, has no commitment, and the acquisition is time-bounded. The unique features of renting consumption create new challenges for firms. Surprisingly, little research has focused on consumers' rental behavior- a fast growing temporal mean of product acquisition. There is a strong bias towards long-lasting committed relationship in pertinent consumer product relationship research (Alvarez and Fournier 2011). However, not all the relationship can last for long. As Fournier (2014) points out, the neglect of other relationship types besides committed relationships will cause potential big profit loss. We therefore study a specific type of non-committed relationship- consumers' fling relationships with rented products.

Past research has mainly emphasized on ownership, whereas little attention has been directed towards examining how people think and feel if they do not own the products. There is a mere ownership effect that owners tend to evaluate an object more favorably than non-owners (Beggan 1992). Kirmani, Sood, and Bridge (1999) compare owners and non-owners and suggest that owners have more favorable attitudes towards the products partially because they have more direct experience with the products. Non-owners in most of past research have zero direct experience with the products they evaluated. Thus, no positive affect or relationship has occurred. Renting is characterized by a temporary and circumstantial consumption context (Chen 2009). No transfer of ownership takes place (Bardhi and Eckhardt 2012); the consumer simply, and temporarily, gains access to use a product. Renters, while being non-owners, are not the same as non-owners in past research. They do have a short-term interaction with the rented product. It is very likely that renters who do not have ownership but have short-term direct experience with the products should at least gain some emotional rewards from the experience and form a temporal relationship with the product during that rental time frame.

Fournier (1998) conceptualized a range of consumer-brand/ product relationship, including both long-term, committed relationships such as arranged marriages, committed partnerships, best friendships, and less committed relationships such as casual friends, secret affairs, and flings. Fling is "a hedonic, non-committed, time-bounded relationship driven by impulsivity and the need for experimentation…" (Alvarez and Fournier 2012 :77). We propose that from a relationship perspective, renting is analogous to a fling relationship because they share many characteristics. For example, they both happen in a short-term situation. Compared to buying, the decision to rent is more impulsive and less thoughtful (Pocheptsova, Kivetz and Dhar 2015). Because of its non-commitment nature, renting provides the freedom to explore various products. Similarly, fling is driven by impulsivity and the need for experimentation. People desire for a fling relationship because they are able to date various partners without any emotional guilt. Moreover, the outcome of such short-term relationships may be very similar. People in a fling relationship feel the urge to try something wild because it is temporary in their lives. They often allow themselves to get lost in the heat of the beautiful moment. Similarly, thinking about the deadline of rental return, consumers should be motivated to make the best use of the products and experience more intense emotions than when there is no time frame of possession. While a long-lasting committed relationship creates warm and peaceful feelings, a short-term fling relationship often contributes to passionate, energetic and exciting affections (Aaker 1997; Fournier 1998); however, this enthusiasm fades away over time (Aaker, Fournier, and Brasel 2004). We therefore predict that engagement with a rented product should generate higher excitement than with an owned product but that this advantage should decline over time. We test our hypotheses in four experiments.

In Study 1a, 264 Mturk workers who owned a car and were eligible to rent a car participated in a between-subject (rent versus own) study. They imagined driving a *rented* car versus their *own* car for a leisure trip. We measured excitement using five items: excited, fun, adventurous, fresh, and enthusiastic ($\alpha = .95$). Additionally, we measured to what extent they regarded the car as a partner (Aggarwal and Mcgill 2012) and their perception of the car's performance on how fast, powerful, smooth, and safe ($\alpha = .73$).

An independent t-test showed that people experienced higher excitement when driving a rented car than driving their own car ($t(262) = 2.44$, $p < .02$). Moreover, they were less likely to regard the rented (vs. owned) car as a partner ($t(262) = 2.62$, $p < .01$). There were no differences on the perceived car performance ($p > .28$). Study 1a provides initial support for our hypothesis that rented product generates greater excitement than an owned product despite similar perceived performance. The relationships formed with rented vs. owned goods are different.

In Study 1b, we addressed the limitation of self-reported measure of excitement emotion by using eye-tracking- a tool more accurately measures excitement by observing participant's attention, indicated by the fixation tendency on different stimuli. Sixty-seven students participated in an eye-tracking study. Participants imagined themselves riding a rented (vs. owned) bike in a park. Then, they viewed five pairs of pictures; each pair consisted of two similar pictures with only one distinction - one is eliciting calm feeling, the other one conveys exciting feeling (pretested). The position of each picture was randomized. Each pair of picture was shown for ten seconds.

A linear mixed-effects model (with subjects specified as a random factor) show that participants in the own condition fixated on the calm images more times and for a longer duration than the exciting images, compared to their counterparts in the rent condition (number of fixation: $\beta = 1.43$, $SE = .72$, $p = .048$; fixation duration: $\beta = 1.83$, $SE = .41$, $p < .001$). With our assumption that participants' attention was focused on stimuli that were congruent with their emotions following a consumption experience, participants' eye movement demonstrated that consuming a rented product was perceived to be more exciting than consuming an owned product.

In Study 2, we explored whether this no-committed relationship is resonant with fling relationship. One unique characteristic

of fling relationship is that the initial excitement experienced in the relationship diminishes over time. If higher excitement arises from a rental car as it is similar to a fling relationship is true, increasing the number of times consumers rent the same car should decrease the fling perception and subsequently reduce excitement. 231 Mturk workers participated in a 2 (rent vs. own) x 2 (one time vs. multiple times) between-subjects study. Participants imagined driving a rented car (vs. their own car) for a leisure trip. They read that this is the first time they have rented a car/taken their own car to go on a trip (vs. they have rented a car/taken your own car on a trip more than a dozen times). Similar to study 1, we measured excitement with five items (α = .94).

As predicted, we found a significant interaction between these two factors (F (1, 227) = 4.46, p < .04). Participants' excitement related to the rented car decreased when they had driven it several times (vs. once) (F (1, 227) = 2.9, p < .090). In contrast, the excitement of driving an owned car did not change (F (1, 227) = 2.47, p > .118). Results from study 2 provide evidence that using rented products are conceptually similar to engaging in a fling relationship, which impacts the excitement experienced with the product. The fading excitement overtime occurred for a rented product, but not for an owned product.

In Study 3, we directly examined the perceived fling relationship as the mechanism. 298 students participated in a between-subjects single-factor (rent vs. own) design study in a lab setting. To ensure that the excitement we observed in study 2 did not arise from the experience itself, we used a more mundane, less exciting experience; participants were instructed to imagine that their office is a few blocks away from their house and they ride a bike to work. Following our excitement measure, we included a measure of fling perception (α = .78; adapted from Alvarez and Fournier (2012)) (e.g. "I experienced an intense but short-lived passion towards this bike", "When I chose this bike to rent/buy, I was impulsive"). Then we measured downstream consequences including product evaluations and brand evaluations, and likelihood to recommend.

Results from an independent T-test showed that compared to riding an owned bike, a rented bike yielded higher excitement (t(296) = 6.15 , p < .001), higher fling perception (t(296) = 7.55, p < .001), greater product evaluation (t(296) = 3.0, p < .01), greater brand evaluation (t(296) = 3.08 , p < .01), as well as higher likelihood to recommend to others (t(296) = 2.93 , p < .01). Bootstrapping analysis (Hayes 2012, Model 4) revealed a 95% confidence interval excluding zero (.4165, .8278) for the indirect effect, indicating a significant mediation effect (β = .61, SE = .10). Further mediation analysis with fling and excitement as serial mediators (PROCESS Model 6) and product evaluations, brand evaluations, and likelihood to recommend as dependent variables shows significant indirect effects. Excitement in turn leads to higher product evaluations (95% CI: .1830, .4304); higher brand evaluations (95% CI: .1185, .3254;), and likelihood to recommend the product and the store to others (95% CI: .1622, .4177).

In Study 4, we manipulated fling relationship and ruled out the alternative explanation that the excitement from rental may be due to its newness. If primed the fling relationship with the owned product, the advantages in excitement due to rent over own should disappear. 281 students participated in a 2 (rent vs. own) x 2 (fling vs. control) between-subject study for credit. Participants imagined driving a new rented car or a new owned car for a trip. To prime fling perception, they read a paragraph describing the feelings experienced in a fling relationship with the car. (e.g. "It's just like dating an attractive partner, though for a short while. Since the moment is short-lived and temporary in your life, you allow yourself to get lost in the heat

of the beautiful moment..."). In the control condition, participants were simply asked to "take a few minutes to imagine your feelings with the car you are driving". We measured Excitement (α = .92), risk-taking behaviors (e.g. drive slightly above the speed limit if no other cars are on the highway; drive through the yellow light, …' (α = .72), and evaluations of an advertisement highlighting excitement ('Visit Japan: Full of exciting adventures'). We included a fling manipulation check and perceived car newness measure.

An ANOVA analysis revealed significant main effects of acquisition mode (F(1,275) = 5.85, p < .03), fling manipulation (F(1,275) = 11.71, p < .001), and an interaction of these two independent variables (F(1,275) = 3.99, p < .05). In the control condition, we replicated the effect of rent versus own on excitement (p < .01). As predicted, in the fling condition, there was no difference in excitement level (p > .76). To further assess downstream consequences, we ran Hayes' Process model 7 with risky behaviors and ad evaluation as dependent variables. The indirect effect of acquisition mode on risky behaviors through excitement was significant only in the control condition (95% CI: -.1830: -.0224), but not in the fling condition (95% CI: -.0719: .0413). Similarly, the indirect effect of acquisition mode on evaluations of the advertisement through excitement was significant only in the control condition (95% CI = -.1742: -.0035), but not in the fling condition (95% CI: -.0655: .0334). Since the rented car and the owned car are identically new, the effect found for level of excitement was unlikely to be caused by the perceived newness of the product.

This article contributes to research on consumer brand relationship and ownership literature. First, we uncovered a previously unexplored type of relationship namely fling and its influence on consumer attitudes and evaluations. To our knowledge, this is the first empirical research investigating fling relationship and its consequences. We developed and validated a new method to manipulate fling relationship in a non-interpersonal domain. Our finding that the fling relationship can increase excitement when consuming rented products and boost evaluations while at the same time may promote risky behaviors is novel. Our results are consistent across various product types (car and bike), experiences (leisure and work), populations (adult samples and university students), and multiple methods (e.g. with measured fling and manipulated fling; experiment and eye-tracking). Our work thus provides a fresh perspective on non-enduring relationships. We also extend the line of ownership effect literature by providing insights of the opposite side of ownership. Non-ownership in previous studies all involved no interactions with the products. Our research has enriched the definition of non-ownership such that there could be a type of non-ownership that consumer engages with the product for a short term but does not obtain ownership. Our research also adds to the literature on consumer acquisition modes. Pham (2013) calls for more attention to other forms of acquisitions besides purchasing. Given the increasing variety of the products available to rent, this research fills an important gap in the literature, which has largely ignored this growing market of purchase alternatives.

Our findings provide important insights to rental businesses. Rental companies can highlight the excitement and fling-like experience in their marketing communication. Some industries such as car rental should pay special attention to the rental customers because of the inherent excitement of fling; their customers may be more likely to engage in risky behaviors than they originally thought. Moreover, firms that are struggling with building strong and loyal consumer brand relationships could refresh their perspective; a fling relationship with the customers might be beneficial as well.

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Judging a Book by Its Cover: Salience of Fashion Cues Signals Lower Self-Control

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EXTENDED ABSTRACT

Scholars have long recognized fashion as a phenomenon affecting many aspects of our lives (Solomon and Rabolt 2007; Thompson and Haytko 1997). Revenue in the Fashion segment amounts to US$598,631 million in 2019, with an expected annual growth rate of 8.7%. Theoretically, fashion has been defined as the "process of social diffusion by which a new style is adopted by some group(s) of consumers" (Solomon and Rabolt 2007). However, outside of the scholarly research, fashion has referred mainly to clothing and accessories (e.g., bags), and is often used as a synonym for the currently popular style in clothing. Many psychological and sociological factors help explain what motivates people to be fashionable. For example, signaling theory suggests that fashionable clothing enables consumers to stand out from the crowd and facilitates identity signaling (Berger and Heath 2007). Meanwhile, people in superordinate social groups adopt new fashion to prevent those in the lower class from imitating them (Sproles 1981).

However, very little research has investigated how individuals who voluntarily associate themselves with fashion cues, for example, who spend money and time on keeping up with fashion trends will be perceived by others. Our research thus extends current understanding on fashion by examining this understudied issue. Despite the well-established finding that people who appear attractive tend to be perceived as better and treated better (Cryder, Botti, and Simonyan 2017; Kim and Lennon 2005), we propose that being fashionable might have unintended negative consequences. Specifically, we hypothesize that individuals associated with fashion cues (e.g., dress fashionably) will be perceived as lacking in self-control both at a trait level and in other unrelated domains. This happens because of two reasons. First, fashion-related consumption tends to be hedonic and indulging in nature. Second, fashion trends last a relatively short period of time. In order to keep up with the latest fashion trends, consumers need to make new purchases frequently, which could result in overspending. We tested this hypothesis in a series of studies.

In experiment 1A, participants were shown a pie graph illustrating how users of a website allocate their time on viewing contents related to different topics. In the high (vs. low) salience condition, users spent most of their time browsing fashion-related content (vs. news). Next, participants rated the users of this website on trait self-control. Supporting our prediction, participants perceived the users of the website as lower in self-control in the high fashion salience condition ($M = 3.52$) than in the low fashion salience condition ($M = 4.91$), $p < .001$.

Experiment 1B employed the same fashion salience manipulation as study 1A, except that we added a third condition (i.e., entertainment condition), in which users spent most of their time browsing entertainment-related (e.g., food, travel) content. Next, participants predicted whether the customers of the website would choose expedited shipping at a higher expense, as an indicator of impulsivity. Again as hypothesized, the predicted likelihood of choosing expedited shipping is significantly higher in the fashion-salience condition ($M = 5.23$) than in the news-salience condition ($M = 4.42$; $p < .01$), and more importantly the entertainment-salience condition ($M = 4.52$; $p < .01$), ruling out the possibility that our effect was a result of hedonism.

Experiment 1C studied the perception of a single person rather than a group of people and aimed to rule out the halo effect resulting from less favorable overall attitude toward fashion pursuers. Participants read a brief introduction of a fictitious college student called Anna. In the high salience condition, participants read that Anna was very fashionable and always kept up with the latest fashion trends. By contrast, in the low salience condition, such information was not provided. Other demographic information such as Anna's age and country of birth was kept constant for all the participants. Then we measured participants' rating of Anna on trait self-control and overall likeability. The results showed that fashion salience led to lower self-control perception ($= 5.10$, $= 5.59$; $p < .01$) and controlling for overall likability did not change our main effect ($p < .05$), indicating that the effect was not due to an overall negative affect toward fashion lovers.

Experiment 2 examined the proposed effect in a gift-choice context. Participants were asked to imagine choosing a gift in a clothing store for a friend who either valued the life style of "self-control and self-discipline" or that of "living in the moment". In the fashion (vs. no fashion) condition, participants were recommended a sweater which looked trendy and stylish (vs. comfortable and basic) sweater. Next, participants indicated their purchase intention for the sweater. A matching effect was observed (interaction $F(1, 362) = 13.58$, $p < .001$): when choosing a gift for a friend who values self-control, purchase intention of a fashionable gift ($M = 4.50$) was significantly lower than that of an unfashionable gift ($M = 5.17$; $p < .01$). In contrast, when choosing a gift for a friend who values living in the moment, purchase intention of a fashionable gift ($M = 4.88$) was significantly higher than that of an unfashionable gift ($M = 4.22$, $p < .05$).

Experiment 3 attempted to extend our findings to a job allocation context. Participants were shown the description of a candidate called Mike. Like in study 1C, we only varied fashion-related information while keeping other information constant (e.g., age, hobby). In addition, participants were also provided with the description of a job, which either required high self-control or high adaptability. Results confirmed our prediction (interaction $F(1,312) = 7.00$, $p < .01$). Participants considered Mike less qualified for a job requiring self-control when he was associated with a fashion cue ($M = 3.71$) than when he was not ($M = 4.20$, $p < .01$). However, fashion cues did not make a difference when the job requires adaptability ($= 4.09$, $= 3.99$; NS).

In summary, the findings of this project contribute to both the fashion literature and also the person perception literature by identifying an unexpected negative consequence of being fashionable.

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Renting: A Singles Market?

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EXTENDED ABSTRACT

"*Going Solo: the Extraordinary Rise and Surprising Appeal of Living Alone*"(2012) points out the fundamental social shift in American society. The number of single adults outnumbers that of married adults and the trend of being "single" has changed consumption dramatically (Hanes 2015). In China, more than 200 million singles drive a so-called "singles' economy"-singles become "profligate spenders" (Burkitt 2015). Nov 11ᵗʰ, the Singles Day, has become the biggest global shopping event of the year. Companies have embraced this trend, for example, cruises created more "cabins for one" and the online reservation service OpenTable has seen 62% growth in reservations for one (Bendix 2015). In contrast to these marketplace trends, research to date has mainly focused on the consumption patterns of people in close relationships (Cavanaugh 2016). Little appears to be understood about the behaviors of this increasingly powerful single group.

In one of the few papers on single consumption, Ratner and Hamilton (2015) reveal that solo consumers inhibit themselves from engaging in certain consumption behaviors because they want to avoid social negative inferences. There used to be a social stigma associated with singles-e.g. those who are forced to be singles due to various reasons (e.g. not able to find a partner, get divorced). However, the new single populations are different. Those who are voluntary to remain singles enjoy solitude, value their independence, and become a "trendy" group in society. Psychologists believe that the growth of singles is possibly due to the increased arousal of self-expression (DePaulo 2007). This research focuses on this new non-stigmatic type of singles who approach singlehood with empowerment (Spielmann et al. 2013). Complimenting this line of inquiry, we propose that there are types of consumer behaviors that might be *more* appealing to solo consumers, such as renting of products and services. We explore whether the solo status affects consumer's rental tendency and demonstrate that the fast-growing single populations show higher tendency to rent as compared to the people in relationships.

While there is no research on rental behavior and relationship status, related work on close relationships offers some insight. Van Lange, Rusbult, and Drigotas (1997) find that people in relationships are more willing to scarify self-interest to sustain their relationships than singles. Consumers often make decisions differently when considering only themselves versus thinking of other people. Individuals tend to seek pleasure for themselves and avoid pain and uncertainty for others (Aaker and Lee 2001). Promotion concerns tend to dominate among unmarried individuals, whereas married couples have to balance between promotion and prevention concerns (Molden and Winterheld 2013). Similarly, independent mindset promotes feeling-based decisions and interdependent mindset facilitates reason-based decisions (Hong and Chang 2015). Taken together, relationships regulate people's decisions to be more rational, optimal to the group benefits even with a tradeoff of self-interest; Singles desire for personal enjoyment pursuing and would prefer no-constrain decisions.

Renting, an alterative acquisition mode besides buying, offers temporal attainment without long-term commitment. It is a time-bounded relationship between the renter and the product. Due to this non-commitment nature, renting provides freedom to explore various products. The potential cost of making a wrong decision is less for renting as compared to buying. Compared to buying, the decision to rent is more impulsive and less thoughtful (Pocheptsova et al., 2015). Therefore, it bears fewer burdens to the renting decision makers. The freedom associated with renting is resonant with the sense of autonomy the new singles valuate. Thus, buying should be more appealing to people in a stable relationship because owning avoids changes and elicits safe and stable feelings; and renting, which allows changes and bears more risks, might be more acceptable to singles. Therefore, we predict that singles will be more likely to rent than those in relationships. We have conducted three studies to test our hypothesis.

In Study 1 we measured relationship status (singles vs. relationships) and manipulated acquisition mode (rent vs. buy) between-subjects. 626 adult participants first answered questions about their current relationship status. Next participants indicated how likely they would acquire (buy or rent, between subjects) various products in the next 6 months (movie, songs, books, jewelry, party dress/suits, cellphone, computer, vacation home, furniture and car; alpha= .81). An ANOVA analysis revealed a significant main effect of acquisition mode ($F(1,622)=184.3$, $p<.001$) and an expected significant interaction effect of the two independent variables on likelihood to acquire ($F(1,622)= 6.445$, $p< .02$). Singles reported higher likelihood of renting than those in relationships ($M_{singles}$=2.54, $M_{relationships}$= 2.28; $F(1,622) = 4.83$, $p< .03$); however, there was no difference in buying condition ($p> .16$). Study 1 results provide initial evidence that renting is more appealing to the singles than their relationship counterparts.

Study 2 aimed to replicate our effect and test an alternative process based on the duration of product use. If the singles desire to rent because they envision shorter-term use of the product, they should have higher renting tendency when renting occurs in a short (vs. long) time period. The study employed a 2 (measured relationship status: singles vs. relationships) x 2 renting time (short vs. long) between-subjects study. Similar to study 1, after relationship status measure, 313 participants were assigned to short vs. long renting time conditions. Participants were informed that they were looking for a movie to watch this weekend and it is due on Monday (short time-watch movie once) or by end of the month (long time-watch movie multiple times). We measured the likelihood to rent ten different movies and willingness to pay to rent a movie. An ANOVA analysis revealed a significant interaction of the two independent variables on likelihood to rent($F(1,309)= 4.00$, $p<.05$). In short time condition, singles were more likely to rent than those in relationships ($M_{singles}$= 3.07, $M_{relationships}$= 2.80; $F(1,309)= 3.68$, $p< .06$); in long time condition there was no difference ($M_{singles}$= 2.93, $M_{relationships}$= 3.06; $p> .36$). Willingness to pay data showed the same pattern. The results suggested that higher renting propensity for singles is not driven by desire for shorter-term use of the products relative to consumers in the relationships.

Study 3 (N=155) investigated underlying mechanism of whether the singles' renting tendency is driven by the freedom from consideration of others. We used a 2 (relationship: singles vs. relationships) x 2 self-construal (independent vs. interdependent) between-subject design. To manipulate their relationship type, we asked participants to think of a period that they were single (vs. having a committed relationship with others) and list three activities that they will do individually (vs. do together with their partners). To manipulate self-construal (Krishna, Zhou, and Zhang 2008), participants read a story

and circled all the pronouns used in it. The story was identical except that the pronouns were singular (e.g. I, my, me) in independent self-construal condition and plural (e.g. we, our, us) in interdependent self-construal condition. Then we measured participants' intentions to rent and buy various products as in Study 1. We predicted that singles, who are more self-focused, would be affected by self-construal shift and change their rental preferences. However, people in relationships, who already balance between self and others, would not be affected by shift in self-construal. We found a significant interaction of the two independent variables on likelihood to rent ($F(1,151) = 9.09$, $p < .05$). For singles, interdependent self-construal decreases likelihood to rent as compared to independent self-construal ($M_{independent} = 2.50$, $M_{interdependent} = 2.00$; $F(1,151) = 5.07$, $p < .03$). For people in relationships, altering the relational construal did not change on likelihood to rent ($M_{independent} = 2.13$, $M_{interdependent} = 2.27$; $p > .53$). These patterns did not hold for likelihood to buy ($p > .41$).

We find that singles are generally more likely to rent than those in relationships. This tendency is not affected by the length of product use but can be attenuated by interdependent self-construal. To our knowledge, this research is the first to study how interpersonal relationships affect acquisition mode choices. It is a novel finding that renting is a specific acquisition mode that the solo consumers desire. It is not the short-term relationship renting enables attract the singles. It is the freedom and autonomy the renting signals entice the singles. These findings contribute to the emerging research about interpersonal influence on consumer behavior and have important managerial implications for the blooming rental industry. Rental companies may target the solo consumers and design marketing communication highlighting the freedom and autonomy of renting experience.

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How Many Followers Do You Have?
How Social Media Audiences Affect Consumer Memories

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EXTENDED ABSTRACT

Since word-of-mouth has been shown to attract new customers and increase sales (Berger and Iyengar 2013), companies have invested countless resources to encourage sharing consumption experiences on social media. Due to its connecting nature, social media allow people to either share with a few audiences (narrowcasting) or share with many people (broadcasting). Past research has only investigated how the audience shape what people share (Barasch and Berger 2014). Little is known about how the perceptions of audience impact the way the memories are remembered. We address this gap and propose that perceiving the audience size as small (large) will be more (less) likely to facilitate memory outsourcing and lead to memory attenuation.

Transactive memory systems (TMS) literatures suggest that close in-group members share responsibilities for remembering to enhance cognitive efficiency (Wegner 1987). The TMS partners can be the technologies and humans. For instance, perceiving the file has been saved on the computer (erased) lead to poorer (better) memory of the file (Sparrow, Liu and Wegner 2011). Participants' memory for the museum tour was worse when they had taken photos with the digital cameras as compared to only observing the objects (Henkel 2014). Recent evidences suggest that social sharing may lead to memory decay if people outsource their meaningful memories to the close partners rather than strangers (Huang and Rajagopal 2017a).

Consumers can form close relationships with technologies and empower them potential partners. Huang and Rajagopal (2017b) find that sharing via technologies can lead to identity memory decay when the technological platforms have human interacting features (e.g. anthropomorphism). Social media, the most popular technological platforms people share their experiences, are special for their inherent social nature and thus should facilitate humanized perception. Thus, we expect that sharing on social media can lead to memory decay. Further, we predict that the audience on social media matters. The relationships are closer and the connections are tighter when the group size is small (rather than large) because more interactions are possible among all members. As the group size increases, the connections disperse and the relationships become more superficial (Cooley 2015). Moreover, the coordination (work cooperatively) is an important indicator of memory outsourcing. Prior research has found that the small group has better performance on the student group project because group members can coordinate better as compared to a large group (Michinov and Michinov 2009; Jackson and Moreland 2009). Palazolo et al. (2006) compare the network size (4 vs. 20) and reveal that smaller networks has greater TMS accuracy (knowing who knows what). These results suggest that in social sharing context, memory outsourcing should be more likely to occur in a small rather than a large group.

Study 1 tested the basic effect that the memory shared on social media will be weaker as compared to no sharing. 140 American Mturkers participated a one cell sharing 3 (writing and sharing on social media vs writing only vs. no sharing) between subject study for monetary reward. They were exposed to a travel scenario about a one-day tour to Hong Kong (tourism spot photos were provided). After encoding the same experience, they were randomly assigned to writing down this travel experience in details and share it on Face-

book vs. writing it in details for self vs. no sharing (describe a book recently read). After the filler tasks, their memories were tested by free recall of travel experience. An ANOVA results supported our prediction that participants remembered less details when they shared their experiences on social media as compared to no sharing ($F(1,138)=4.45$, $p < .05$; $M_{socialmedia} = 5.53$, $M_{nosharing} = 6.81$). Interestingly, writing it without sharing seems no difference from no-sharing ($M_{writing} = 6.03$, $M_{nosharing} = 6.81$; $F(1,138)=1.39$, $p >. 24$), which suggests that sharing action is critical for memory outsourcing.

Study 2 examined that the memory decay will be stronger when the audience size is small than large. Ninety-five American Mturkers participated a one-cell audience size 2 (small vs. large) between-subjects study for money. After encoding the travel experience, they shared the entire experience on their own Facebook. Then they were randomly assigned to different audience size (small vs. large) conditions (adopted from Hamilton, Ratner, and Thompson 2011) by responding to a question "How many Facebook Friends do you think will pay attention to the travel experience that you shared just now?" from a 7 point Likert-type large audience scale (1 = 10 or below; 10 = 100 or above) or a small audience scale (1 = 100 or below; 10 = 1000 or above). We recorded their sharing content to ensure the same amount of encoding and sharing. They then participated in some filler tasks prior to recalling their travel experience. The dependent variables: free recall of the experience and perceived memory saved (saved/recorded/stored; 3-items, $\alpha = .91$) were measured before the demographics.

An independent sample t-test revealed a marginally significant difference on correct recall ($M_{large} = 6.06$, $M_{small} = 5.04$, $F(1,93) =3.39$, $p <. 07$), confirming that participants recalled less correct details of travel experience after sharing it on Facebook when they perceived their audience size is small as compared to large. Interestingly, the perceived memory saved results showed the opposite ($M_{large} = 4.53$, $M_{small} = 5.09$, $F(1,93) =2.98$, $p <. 06$), implying that participants believed the small group is a safer memory storage than the large group, thereby outsourcing more to the small group and leading to memory decay. The study 1 supported our notion that sharing memory on social media would result in memory decay (enhancement) when shared with a small (vs large) group of audience.

Study 3 investigated the moderating effect of audience heterogeneity. Since the memory outsourcing was impaired by the large audience size due to the difficulty in identifying "who knows what", it should restore when enhancing the heterogeneity of the large group because the sharers should be better able to identify who may remember what they have shared. Moreover, heterogeneous group are perceived as more mindful than homogenous group (Morewedge et.al 2013) and thus a safer memory repository.

Ninety-four American undergraduate students participated a 2 audience size (small vs. large) x 2 audience heterogeneity (high vs. low) between-subjects study for credit. The scenario and study procedures were similar to study 1's. The audience heterogeneity (high vs. low) was manipulated by a research report indicating the diversity (vs. homogeneity) among people's social media audiences.

ANOVA results revealed a significant main effect of audience size ($F(1,90) = 3.76$, $p = .05$) and a directional interaction between audience size and audience heterogeneity on correct recall ($F(2,90)$

= 3.76, p =. 11). As predicted, when the audience heterogeneity was low, sharing with the small group resulted in greater memory decay as compared to the large group (M_{large}= 7.76, M_{small}=5.47, $F(1, 90)$ = 6.13, $p < .02$), replicating study 1 results; however, when the audiences became more heterogeneous, there were no significant difference between small and large size groups (M_{large}=6.11, M_{small}=5.90, $F(1, 90)$ = .05, $p > .81$).

Study 4 tested that the advantages of memory outsourcing (and thus memory decay) of sharing with smaller group will be impaired by the audience anonymity. 94 American Mturkers participated a 2 audience size (small vs. large) x 2 audience anonymity (yes vs. no) between-subject study. Participants shared their travel experiences with a small (vs. large) anonymous (vs. non-anonymous) group on a travel discussion forum. Free recall and Recognition memories were measured after the filler tasks. The experience recognition measure required respondents to select details about the travel experience from a set of 24 statements (12 true and 12 false). Corrected recognition was computed by subtracting false recognition from true recognition (Dalton and Huang 2014).

An analysis of variance revealed a significant interaction between the audience size and audience anonymity on the free recall ($F (1, 90)$ = 4.72, $p < .01$). When the sharing audience is non-anonymous, participants remembered fewer details when the audience size is small as compared to large (M_{large}= 6.12, M_{small}=4.83), replicating previous findings; however, when the sharing audience is anonymous, the results reversed (M_{large}= 6.09, M_{small}=4.48, p< .01). Corrected recognition of the travel experience showed the same patterns ($F (1, 90)$ = 8.46, $p < .01$). The results imply that being able to identify "who may know what" is important for memory outsourcing. If the sharing audience is anonymous, the memory decay will be attenuated.

In sum, four studies demonstrate that social media can impact memories shared and the perceptions of audiences play an important role. The small audience size may trigger memory outsourcing and consequently attenuate memories shared. Increasing the perceived heterogeneity of the large group can make it function similar to the small group. Enhancing the audience anonymity can impair the memory decay caused by the small audience size. These findings have important implications for social media marketing. For example, encouraging sharing consumption experience may be detrimental to the brands if the sharer only has a few followers or if the sharer has a large size but diverse followers.

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Does Curiosity Make Consumers Less Critical?
Effects of Ad-Induced Curiosity on Persuasion Knowledge and Counterarguing

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EXTENDED ABSTRACT

Prior findings suggest that curious people direct their attention to curiosity-evoking stimuli (Isikman et al. 2016) and process information more intensely (e.g., Kang et al. 2009; Marvin and Shohamy 2016; Menon and Soman 2002). Thus, one could expect consumers to elaborate advertising content more critical and to be more alert about persuasion attempts when curious. However, we propose the opposite and explain this by the emotional tension urging people to resolve curiosity (Litman 2005), which might distract consumers from the persuasion attempt. Advertisements typically comprise different elements (Kumar 2000) with different functions (e.g., catching attention or conveying a persuasive message), and consumers will allocate most of their available cognitive resources to the curiosity-evoking aspect (Kashdan and Silvia 2009). Since cognitive resources are limited, resolving curiosity competes for consumers' attention with, for example, the selling arguments. Current research shows that a curiosity-evoking event (e.g., phone ringing) diverts attention from an experiential activity (e.g., watching a film) (Isikman et al. 2016). We posit that this can also occur when the curiosity-evoking element and a concurrent message are embedded within the same stimulus. Similarly, humorous elements in advertisements reduce resistance to persuasion because it draws the attention of consumers (Strick et al. 2012). Our major research question is whether experiencing ad-induced curiosity leads to a less-critical consumer response, increased persuasion, and a more favorable effect on attitude. Furthermore, we presume a rather general effect and posit that the favorability of an offer does not play a role in the proposed effect. In a series of four studies, we investigate these assumptions.

In the first study, the participants ($N = 66$) were approached in front of a shopping center in a large city and either saw a favorable or an unfavorable offer for a coffee machine. In both conditions, we applied the same curiosity-inducing procedure by creating an information gap (Loewenstein 1994) first and providing more information later (e.g., Menon and Soman 2002). Thus, respondents saw a teaser ad revealing neither the product nor any detailed information. After rating their momentary curiosity, they saw a second ad containing more details. Then, we assessed their persuasion knowledge (Kirmani and Zhu 2007). We used bootstrapping (PROCESS, Hayes 2018) and found that ad-induced curiosity reduced consumer's persuasion knowledge (i.e., less skepticism toward the ad content) ($b = -.48$, $t(62) = -3.22$, $p < .01$). This effect occurred independently of the attractiveness of the offer ($b = .14$, $t(62) = .61$, ns).

In the second study ($N = 283$), we surveyed customers of a cosmetics company online. We applied the same basic curiosity-inducing procedure as in Study 1 and created a teaser ad for a new gift box. In addition to the measures of Study 1, we assessed their attitude toward the product. A mediation model (Hayes 2018) provided evidence that ad-induced curiosity reduced persuasion knowledge ($b = -.16$, CI: [-.23, -.10]) and because persuasion knowledge negatively affects attitude ($b = -.42$, CI: [-.52, -.31]), the overall effect of curiosity is positive (CI: [.03, .11]).

In the third study ($N = 161$), we manipulated varying levels of curiosity and operationalized consumers' skepticism differently. We created a 2 (curiosity: low, high) × 2 (offer-favorability: unfavorable, favorable) between-subjects design and invited students to our online survey about an airline offer. For both curiosity conditions, we ap-

plied a similar procedure as previously described. However, in the low-curiosity conditions, the offer details were already revealed in the first step. In addition to the prior measures, we asked respondents to list all their thoughts (Kirmani and Zhu 2007) after each step of information disclosure. Two independent coders counted the number of counterarguments against the offer. This represents a more conservative measure and avoids demand effects. As expected, curiosity reduces counterarguing ($b = -1.30$, $p < .001$), which further affects the attitude toward the offer ($b = -.33$, $p < .001$), without reducing the total number of thoughts. The effect does not depend on the offer's favorability (index of moderated mediation CI: [-.60, .08]).

The fourth study ($N = 192$) replicates the mediation of counterarguing and extends the investigation of curiosity's underlying processes by examining a co-occurring emotional reaction. Again, curiosity was systematically manipulated, and different brands were included as a replication factor. The online study followed a 2 (curiosity: low, high) × 3 (brand replication factor) between-subjects design. We again applied the stepwise information-disclosing procedure and created a fictitious advertisement for a frozen pizza offered by one of two well-known brands or by both in cooperation. We additionally assessed two positive emotions (satisfaction and enthusiasm) after the second step. Two-way ANOVAs demonstrated that respondents in the high-curiosity condition generated fewer counterarguments, more positive emotions, and a higher attitude (all $p < .01$). The number of total thoughts was not affected. For all investigated variables, the interaction with the brand replication factor was not significant. Finally, a multiple-mediation model found evidence for the indirect effects of both counterarguing (CI: [.05, .34]) and positive emotions (CI: [.08, .59]).

Our results show that although prior findings generally propose a more intense processing of information under curiosity, the attention-drawing potential of a curiosity-evoking advertising element distracts consumers from a persuasive attempt. These results extend findings on the evaluation of stimuli in a state of curiosity (e.g., Isikman et al. 2016; Marvin and Shohamy 2006; Menon and Soman 2002), and provide insights into the allocation of attention to different elements of a stimulus. However, future research should examine this allocation process more deeply, perhaps using eye-tracking and qualitative methods. Moreover, by showing a parallel mediation of specific positive emotions, this research builds on previous findings on the positive affective processes resulting from curiosity resolution (Ruan, Hsee, and Lu 2018). From these results, double-edged implications for curiosity-triggering advertisements can be derived. On the one hand, curiosity helps marketers to promote the advertised content. On the other hand, it might be important for policymakers to protect consumers from accepting an offer without a careful assessment of its potential pitfalls.

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The Bad Taste of Healthy Food Discounts

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INTRODUCTION

As obesity rates continue increasing across the world, especially in Western countries, much focus has been put on designing effective strategies to stimulate healthier food choices. A potential strategy to direct consumers towards consumption of healthier food options is food pricing strategies (Afshin et al. 2017). For example, the World Health Organization has demanded that healthy food alternatives should be made the most attainable option in terms of price and other attributes (2015). In fact, already in 1998, when studying drivers of healthier food choice, Nestle and colleagues stated that "improving the availability of healthier foods may be one of the most powerful approaches to influencing food selection" (1998, p. 52) linking both physical and economical factors to availability. On way to make healthier food more affordable and attractive is by lowering their prices by offering price discounts.

Despite their potential to induce healthier food consumption, recent research has found that for example in the Netherlands only 30% of retailer price promotion campaigns target healthy food products (Ravensbergen et al. 2015)there is a lack of good-quality evidence on this topic. Therefore, the aim of this study was to determine the proportions of healthy and unhealthy foods on promotion in Dutch supermarket flyers.\n\nMETHODS: Supermarket food promotions were assessed using the weekly promotional flyers of four major Dutch supermarkets over a period of eight weeks. All promotions were evaluated for healthiness, price discount, minimum purchase amount, product category and promotion type. The level of healthiness consists of a 'healthy' group; products which have a positive effect on preventing chronic diseases and can be eaten every day. The 'unhealthy' group contain products which have adverse effects on the prevention of chronic diseases. Data were analysed using ANOVA, independent t-tests and chi-square tests.\n\nRESULTS: A total of 1,495 promotions were included in this study. There were more promotions in the unhealthy category; 70% of promotions were categorised as unhealthy. The price discount was greater for the healthy promotions (mean 29.5%, SD 12.1. This may not be surprising given the effectiveness of discounts in driving sales of healthy categories seems to be limited (Kivetz and Zheng 2017; Mishra and Mishra 2011; Nakamura et al. 2015; Talukdar and Lindsey 2012)it is proposed that promotions will have a stronger positive effect on the purchase likelihood of hedonic than utilitarian products. This and related propositions are tested in multiple studies using a variety of product categories and promotions. The results demonstrate that promotions are more effective in driving purchase decisions when: (a. For example Nakamura *et al.* (2015)but limited evidence, that price promotions contribute to a poor diet and the social patterning of diet-related disease.\n\nOBJECTIVE: We examined the following questions: 1 found that the sales uplift from price discounts was dependent on the category healthfulness, such that as the category healthfulness increased, the increase on sales diminished. Given this limited effectiveness of price discounts as drivers of healthier food choices, and the issues related to unhealthy food consumption patterns, it is important to understand the impact of price discounts on the evaluation of factors influencing healthy food choice, especially tastiness, which remains the most important factor driving purchase decisions related to food for most consumers (Januszewska, Pieniak, and Verbeke 2011; Lassen et al. 2016). One of the key factors limit-

ing the choice of healthier foods is namely the lay intuition of consumers linking healthier foods with lesser tastiness (Raghunathan, Naylor, and Hoyer 2006)the authors find that when information pertaining to the assessment of the healthiness of food items is provided, the less healthy the item is portrayed to be, (1. Therefore, this paper aims to answer the question *'How do price promotions influence the perceived tastiness of healthy foods?'*.

THEORETICAL BACKGROUND

There are multiple factors that consumers evaluate before making a purchase decision. Food choice has been shown to be driven to a large extent by expectations and perceptions regarding the food product's tastiness, price, convenience and healthfulness (Januszewska, Pieniak, and Verbeke 2011; Lassen et al. 2016). While the other factors are more objective and somewhat easier to evaluate based on information presented on the package, the tastiness of a product cannot typically be determined before the purchase and consumption of the food. It is, nevertheless, the tastiness of the food that remains the main driver of food choice among most consumers (Januszewska, Pieniak, and Verbeke 2011; Lassen et al. 2016). Therefore, the effects of price discounts beyond mere sales impact should not be neglected, and a deeper understanding of the impact of price discounts on the factors driving food choice is required. By studying the impact of price discounts on the tastiness evaluations of healthy foods, we aim to add to this gap, thereby offering a potential explanation to the previously discussed contradicting results regarding the effectiveness of price discounts as drivers of healthy food choice.

Previous work on price discounts has shown that the presence of an offer may result in consumers paying less attention to product-related information (Chandran and Morwitz 2006). The discount lowers the risk related to the choice, and often encourages consumers to make unplanned purchases (Kacen, Hess, and Walker 2012). Furthermore, Lee and Tsai (2014) suggest that the positive reaction consumers have towards the price discount leads to a more affective processing of information related to the discounted product. In fact, price discounts have been found to decrease consumers' processing motivation (Aydinli, Bertini, and Lambrecht 2014), resulting in consumers making more affective choices and recalling less information related to the product. This affective thinking, which often relies on quick associations, is related to a stronger reliance on heuristics (Forgas 1995; Pretz and Totz 2007).

A key heuristic limiting the consumption of healthy products is the so-called unhealthy = tasty intuition (Raghunathan, Naylor, and Hoyer 2006)the authors find that when information pertaining to the assessment of the healthiness of food items is provided, the less healthy the item is portrayed to be, (1. The concept is already present in the common categorizations of products into 'vices', offering short-term benefits, such as consumption utility and superior tastiness, and 'virtues', offering long-term benefits, which typically are more utilitarian, such as superior healthfulness (e.g. Huyghe, Verstraeten, Geuens, & Van Kerckhove, 2017; Wertenbroch, 1998) researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org. Abstract Consumers' attempts to control their un-

wanted consump-tion impulses influence many everyday purchases with broad implications for marketers' pricing policies. Address-ing theoreticians and practitioners alike, this paper uses mul-tiple empirical methods to show that consumers voluntarily and strategically ration their purchase quantities of goods that are likely to be consumed on impulse and that therefore may pose self-control problems. For example, many regular smokers buy their cigarettes by the pack, although they could easily afford to buy 10-pack cartons. These smokers know-ingly forgo sizable per-unit savings from quantity discounts, which they could realize if they bought cartons; by rationing their purchase quantities, they also self-impose additional transactions costs on marginal consumption, which makes excessive smoking overly difficult and costly. Such strategic self-imposition of constraints is intuitively appealing yet theoretically problematic. The marketing lit-erature lacks operationalizations and empirical tests of such consumption self-control strategies and of their managerial implications. This paper provides experimental evidence of the operation of consumer self-control and empirically illus-trates its direct implications for the pricing of consumer goods. Moreover, the paper develops a conceptual frame-work for the design of empirical tests of such self-imposed constraints on consumption in consumer goods markets. Within matched pairs of products, we distinguish relative \"virtue\" and \"vice\" goods whose preference ordering changes with whether consumers evaluate immediate or de-layed consumption consequences. For example, ignoring long-term health effects, many smokers prefer regular (rela-tive vice. According to these ideas, the healthfulness and tastiness of food products are typically not present in the same product and, thus, are negatively correlated in consumers' minds. Based on these findings, we expect a negative impact of a price discount on the perceived tastiness of a healthy food product. More formally,

Hypothesis 1   *The presence (vs. absence) of a price discount will have a negative influence on the perceived tastiness of a healthy food product.*

We suggest that this is negative impact of the price discount on the perceived tastiness of the healthy food product is driven by the increased affective thinking, and therefore stronger reliance on the unhealthy = tasty intuition, caused by the price discount. Indeed, for example health consciousness, a cognitive process, has been found to significantly reduce, though not completely eliminate, reliance on the unhealthy = tasty intuition (Mai and Hoffmann 2015)this ar-ticle examines the potential of health consciousness to resolve the so-called unhealthy = tasty intuition (UTI. Therefore, we expect the effect to be diminished for consumers processing information cog-nitively.

Hypothesis 2a   *The effect of price discount on perceived tasti-ness predicted in H1 will be mitigated when a cognitive processing style is induced.*

Furthermore, as the unhealthy = tasty intuition is bidirectional (i.e. healthy foods are found less tasty, and unhealthy foods tasty; Raghunathan et al., 2006)the authors find that when information per-taining to the assessment of the healthiness of food items is provided, the less healthy the item is portrayed to be, (1, the healthfulness of the product category should interact with the price discount in influ-encing tastiness perceptions. If our premise holds, and the process underlying the negative impact of price discounts on the perceived tastiness of healthy foods is the increased reliance on the unhealthy = tasty intuition, we would expect the effect to reverse for an un-healthy food product. More specifically, the effect of the price dis-

count should be *positive* on the tastiness perceptions of *un*healthy foods. To test this idea, we formulate the following two hypotheses:

Hypothesis 2b   *The effect of price discount on perceived tasti-ness predicted in H1 will reverse for unhealthy food products.*

One of the key issues in driving healthier consumption be-haviors is the complexity of the factors driving food choice. The healthfulness of food is certainly not the only, and often not even the most important, criteria for the choice (Pollard, Kirk, and Cade 2002). In fact, it seems the tastiness of food remains the key factor driving food purchases (Januszewska, Pieniak, and Verbeke 2011; Lassen et al. 2016). However, this can pose a problem given the un-healthy = tasty intuition (Raghunathan, Naylor, and Hoyer 2006)the authors find that when information pertaining to the assessment of the healthiness of food items is provided, the less healthy the item is portrayed to be, (1. Associating food healthfulness with inferior tasti-ness can therefore lead to a lower motivation to purchase healthier foods.

Price discounts typically increase consumers' purchase inten-tions by giving them the feeling of 'making a good deal', i.e. increas-ing transaction utility (Shia, Reich, and Shiv 2015). However, this is not likely to eliminate the importance of tastiness as price is only one of the many factors underlying food choice (e.g. Januszewska et al., 2011). Thus, we suggest that the negative influence of price dis-counts on tastiness perceptions will attenuate the positive influence price discounts have on purchase intentions of healthy foods through transaction utility.

Hypothesis 3   *The effect of price discount on purchase inten-tion is a) negatively mediated by tastiness per-ceptions (consumption utility), but b) positively mediated by transaction utility.*

EMPIRICAL EVIDENCE

We tested these hypotheses in four experiments. The key find-ings are summarized in table 1. Study 1 provides initial evidence on the effect of a price discount on taste inferences. Participants (N=120) were asked to make a choice between two healthy chicken wraps found on a lunch menu (adapted from Haws et al., 2017), one of which was being sold for the day with a 20% discount. The pro-moted item and the presentation order were counterbalanced. Partici-pants were then asked about the extent to which they focused on the price and the tastiness of the product when making their decisions. The result of a binary logistic regression of wrap choice shows that a greater focus on taste significantly decreases the likelihood of the promoted item being chosen (β = -.639, Wald(1) = 6.25, p = .012). This finding suggests that participants having a greater focus on taste presumably found the discounted wrap as less tasty and therefore chose it less. As the unhealthy = tasty intuition seems to be mitigated by health-consciousness (Mai & Hoffmann,2015)this article exam-ines the potential of health consciousness to resolve the so-called unhealthy = tasty intuition (UTI, we include it as a covariate in our analyses throughout all studies. The significance of the results is not influenced.

Study 2 aims to find more causal evidence for the proposed ef-fect. In a single-factor, two-cell design, participants (N=158) were randomly assigned to either a regular price or a 50% price discount condition and were asked to evaluate a healthy food. For greater gen-eralizability, two products were used as between-subjects: a bag of apple wedges versus a granola bar. Across these products, we found

a significant negative effect of price discount on perceived tastiness (Mregular_price=4.68, Mdiscount=4.24, F(1,153)=3.968, p=.048). The effect of product type was not significant (F<1).

Study 3 investigates the process underlying our phenomenon through a 2 (discount: present vs. absent) × 2 (decision process: cognitive vs. affective) between-subjects design. If the observed negative effect of price discount on anticipated tastiness of a healthy food is driven by discount triggering affective processing, then this effect should disappear when cognitive thinking is primed. Participants (N=365) were first shown an image of a high fiber muesli with or without a 50% discount sticker, but with no specific price information to ensure that the effect was driven by the mere presence of the discount. Next, we manipulated the processing style by asking participants to follow a specific judgment process (relying on reason and logic or their emotions) to evaluate the muesli (Aydinli et al. 2014; Pham et al. 2001). We find a significant price x decision process interaction on the perceived tastiness of the product (F(1, 360) = 4.449, p =.036). The negative effect is only present under the affective processing condition (F(1, 360) = 5.594, p = .019) and disappears when cognitive processing is primed (F < 1), supporting our prediction. Furthermore, a double-mediation analysis shows that while the discount positively influences purchase likelihood through increased transaction utility regardless of processing style, in the affective processing condition this is counteracted by a negative indirect effect through tastiness perceptions (b = -.171, SE = .077, 95% CI [-.330, -.025]) hurting the effectiveness of the price discount. This supports our premise that our effect can help explain the lower effectiveness of price discounts in healthy categories.

Study 4 aims to provide further evidence for the proposed underlying process by showing that the effect reverses for an unhealthy product. We used a 2 (discount: present vs. absent) × 2 (product category: unhealthy vs. healthy) between-subjects design. 173 participants were shown either a healthy (granola bar) or an unhealthy (chocolate bar) product with or without a price discount and were asked to rate the product's tastiness. A two-way ANCOVA showed a significant discount x category interaction (F(1, 169) = 6.135, p = .014). Planned contrasts show that a discount reduces tastiness of a granola bar (F(1, 168) = 2.767, p = .098), whereas it increases the tastiness of a chocolate bar (F(1,168) = 3.371, p = .068).

DISCUSSION AND IMPLICATIONS

In sum, across four studies, we find that price discounts decrease the tastiness perceptions of healthy foods. Furthermore, this effect is driven by the discount increasing reliance on the unhealthy=tasty intuition. Additional measures in studies 3 and 4 show that discounts do not alter healthfulness or quality perceptions, suggesting that the observed effect is not driven by a lower price itself, separating it from the healthy=expensive intuition and price-quality heuristic. This is in line with the work of Lee & Tsai (2014), who also found that the impact of price discounts on enjoyment was not explained by a general expectation of lower quality on the discounted item. In conclusion, our research challenges the effectiveness of pricing interventions in stimulating healthy food consumption: discounts have a negative effect on taste inferences, which may mitigate their impact on consumer demand for healthy foods.

Public policy makers should see these results in two ways: firstly, pushing retailers to promote healthier foods might be less effective than expected in driving healthier consumption, and, second, it might be more fruitful to identify ways to limit the number of discounts targeting unhealthy foods. Further research is needed to understand, for example, whether permanently lowering the prices of healthy foods or increasing those of unhealthy foods would yield dif-

ferent results. Initial research findings do suggest positive effects of taxation of unhealthy foods (e.g. Redondo, Hernández-Aguado, and Lumbreras 2018). More importantly, the results indicate that price discounts may have especially limited impact on helping more taste-focused consumers choose healthier products. These are likely to be consumers who are not interested in purchasing healthy foods, and are, therefore, already in the risk group for health problems related to unhealthy diet patterns. It is crucial to understand these effects in more detail to avoid extending the gap between the healthy and the less healthy even further.

This research is among the first to study the effects of price discount on the tastiness evaluations of healthy foods. It adds to existing, yet limited, knowledge about price discount and tastiness evaluations, as well as to the understanding of discounts as a potential tool to increase healthier consumption. There are, however, factors that this research cannot account for, such as cultural differences. For example, the French have been found to rely on an opposing "healthy = tasty intuition", expecting higher tastiness for healthier foods (Werle, Trendel, and Ardito 2013). Would, then, the impact of price discounts in France be amplified by a *positive* effect on tastiness evaluations? Future research should also look into the post-purchase evaluations of discounted healthy foods: would the discount influence for example the likelihood for repeat purchase? Finally, future research should focus on understanding the possible personality characteristics that moderate the effect. Even though we do not find a moderation by health consciousness, it has been established that product involvement influences the level of information processing, such that a higher involvement leads to more elaborate processing (Petty, Cacioppo, and Schumann 1983). Identifying such moderators could give further insight into types of consumers who do or do not benefit from price discounts in healthy food categories.

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The Modest Marketer: Do Consumers Ever Assume that Products Last *Longer* Than Marketers Claim?

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EXTENDED ABSTRACT

Research on skepticism and persuasion knowledge has shown that consumers believe marketers are prone to exaggeration or stretching the truth (Boush, Friestad, and Rose 1994, Darke and Ritchie 2007, Xu and Wyer 2010). In the context of product longevity claims, this suggests that consumers may expect marketers to exaggerate the typical lifespan of their products.

However, despite the general tendency of consumers to expect exaggerated marketing claims, recent work has shown that consumers may actually be discriminating in their assessment of marketer tactics (Blanchard, Carlson, and Hyodo 2016, Isaac and Grayson 2017). Rather than simply disbelieving marketing claims or assuming that claims are overstated, these articles suggest that consumers may instead take a more nuanced view of marketers' activities, e.g., by making explicit inferences about marketers' motives (Isaac, Brough and Grayson 2016), expertise (Karmarkar and Tormala 2010), or the nature of their interaction (Blanchard et al. 2016).

Building on this premise of a more discriminating and nuanced schemer schema (Wright 1986), we find that consumers are sensitive to whether a marketing claim contains a repurchase cue as opposed to a default new purchase cue. In the presence of repurchase cues, many consumers assume that product longevity claims provided by marketers are conservative rather than exaggerated. We further show that repurchase cues lead consumers to assume that marketers have strategically selected a modest benchmark because of their self-interested ulterior motive to hasten product replacement.

Experiment 1 was a 3-cell (cue: none, repurchase, purchase) between-participants experiment conducted online with 346 university students. Participants in the no cue condition received no information about their past experience with Prospeed badminton rackets. Those in the purchase cue condition learned that they had previously tested but never purchased a Prospeed racket. Participants in the repurchase cue condition instead learned that they already owned a Prospeed racket. Across conditions, participants were given an identical product longevity claim from Prospeed (i.e., "Most rackets take about 3 years to wear out") and asked to estimate the true lifespan of an average Prospeed racket. A one-way ANOVA on this lifespan measure yielded a significant result ($F(2, 343) = 10.61$, $p < .001$, $\eta_p^2 = .058$). Participants in the repurchase cue condition provided estimates ($M = 3.40$ years, $SD = 1.48$) that were higher than estimates provided by participants in either the purchase cue condition ($M = 2.93$ years, $SD = 1.30$; $t(343) = 2.75$, $p < .01$) or the no cue condition ($M = 2.62$ years, $SD = 1.08$; $t(343) = 4.58$, $p < .001$). Furthermore, the mean lifespan estimate provided by participants in the repurchase cue condition was significantly higher than the benchmark of three years ($t(114) = 2.90$, $p < .01$), which provides evidence of the modest marketer inference.

In Experiment 2, we examined whether a more indirect repurchase cue would produce the same pattern of results. A total of 303 students read a product longevity claim about the Prospeed badminton racket. Participants in the no cue [repurchase cue] condition read that the racket "should last [be replaced in] three years." Participants in the repurchase cue condition ($M = 3.36$ years, $SD = 1.32$) expected the true lifespan of an average Prospeed badminton racket to be higher than participants in the no cue condition ($M = 2.86$ years, $SD = 1.09$); $t(301) = 3.58$, $p < .001$. Furthermore, the mean lifespan estimate provided by participants in the repurchase cue condition was higher than the numerical benchmark of three years ($t(148) = 3.29$, $p = .001$), which provides additional evidence of the modest marketer inference.

In Experiment 3, we tested the robustness of our effect by examining whether repurchase (vs. purchase) cues led to different inferences about marketer exaggeration when numerical benchmarks provided by the marketer were high (vs. low). We conducted a 2 (cue: purchase, repurchase) x 2 (benchmark: high, low) between-subjects experiment with 354 students. Participants in the purchase [repurchase] cue condition imagined that they were current [prospective] Spectrum razor blade users who had recently received a coupon for their next [first] purchase. Participants in the high [low] benchmark condition learned that Spectrum claimed its "razor blade lasts for 50 [5] uses." When the benchmark was high, we observed a difference between conditions such that those in the repurchase cue condition estimated the razor blade could be used longer than those in the purchase cue condition, both when the benchmark was high ($M_{repurchase} = 47.91$, $SD = 21.47$ vs. $M_{purchase} = 38.92$, $SD = 16.20$; $t(174) = 3.13$, $p < .01$) or low ($M_{repurchase} = 8.39$, $SD = 4.67$ vs. $M_{purchase} = 6.61$, $SD = 4.53$; $t(175) = 2.57$, $p < .02$). Thus, while the absolute magnitude of the benchmark also influences whether marketer claims are considered exaggerated or conservative, Experiment 3 again shows that repurchase (vs. purchase) cues lead consumers to infer that product longevity claims are relatively more conservative.

Experiment 4 tested whether repurchase cues result in a benign inference about marketer motives (i.e., that marketers are providing conservative claims to optimize their customers' product experience) rather than the more sinister inference (i.e., that marketers are providing modest claims to hasten unnecessary product replacement) that we propose. Online participants (Amazon Mechanical Turk workers, $N = 270$) were assigned to a low or high ulterior motive condition by reading a vignette adapted from Campbell and Kirmani (2000). Subsequently, they proceeded to a purportedly unrelated study where they encountered an identical product longevity claim ("Each XYZ razor blade lasts for 20 uses") and estimated the product's true lifespan. Estimates were significantly higher for participants in the high ulterior motive condition ($M = 21.09$ uses, $SD = 18.83$) versus those in the low ulterior motive condition ($M = 16.49$ uses, $SD = 8.51$; $t(268) = 2.67$, $p < .01$, $d = .31$), a finding which is consistent with the sinister (i.e., non-benign) inference that we propose.

In sum, this research not only provides guidance for marketers when crafting product longevity claims, but also presents new evidence that consumers' schemer schema is more nuanced and multifaceted than previously thought.

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Social Capital and Financial Inclusion: Evidence from a Randomized Field Experiment

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EXTENDED ABSTRACT

It has long been recognized that well-functioning financial systems, in particular a well- functioning banking sector, are paramount for economic development and growth (e.g. Burgess and Pande, 2005; Black and Strahan, 2002; Rajan and Zingales, 1998; Jayaratne and Strahan, 1996). One major obstacle to this is that a large part of the world's adult population is still financially excluded, i.e., they do not have access to formal financial services. For instance, Demirguc-Kuntand Klapper (2013) estimate that around 2.5 billion adults do not have access to bank accounts, representing roughly half of the world's adult population. Most of these individuals are concentrated in the low- income countries of Africa, Asia, and Latin America. Without being able to access the formal financial sector, it becomes difficult to build up assets for investments or to self-insure against transitory or permanent economic shocks through the accumulation of savings. The latter problem is particularly severe given the lack of proper insurance products for individuals in low-income countries.

However, even if low-income households have access to financial services and own a bank account, they may not make use of it, for several reasons. For instance, transaction costs could be too high to make use of the bank account, people may feel discouraged to use the bank account because of a lack of self-esteem or they may not use it because of perceived discrimination or social identity threats. The latter problem may be even more severe for low-income women given the widespread discrimination against women in developing countries. For instance, Demiguc-Kunt et al. (2013) document cross-country evidence that women own less bank accounts, have lower usage rates and save less than men. They argue that legal discrimination is one explaining factor of these differences. Hence, it may not be sufficient to gain access to formal financial services, but from a policy perspective it is also desirable that low-income households actually make use of these services and live normal financial lives.

Our hypothesis builds on empirical evidence showing that social capital can be a powerful mechanism in influencing individual financial decision making. For instance, researchers have shown that social capital impacts financial development in Italy (Guiso et al., 2004), loan repayment in Peru (Karlan, 2005), and tax compliance in the United Kingdom (Hallsworth et al., 2017). Duflo and Saez (2003) argue that social interactions and norms increase participation in retirement savings plans for employees of a large US university. Social capital also plays a crucial role in forming groups with joint liability in lending to low-income individuals (Ghatak and Guinnane, 1999).

However, social capital can have a different importance for men and women in low-income countries. Women are less mobile than men, they stay more often at home to take care of the children, and they also work more often from home (Armendáriz and Morduch, 2010). Furthermore, a formal education that could help overcome disadvantages of women in low- income countries is also less common for women (Friedman, 1992; Carr, 1994). Consequently, their social networks and contacts with neighbors, friends and family members should be both stronger and more frequent. We therefore expect that any reference to women's social capital has a different impact than for men. While we hypothesize that the social capital text message reminders have a strong impact for women, the effects for men are both weaker and less clear to predict. Our results are in line with these conjectures and provide experimental evidence that social capital has a significant effect on if and how much low-income women use their bank accounts and if it impacts their savings behavior.

To test if social capital impacts low-incomes households' banking activities, we conducted a four months long randomized controlled trial (RCT) between November 2016 and March 2017. During these four months, weekly text message reminders were sent to 2,056 individuals, randomly grouped into a control group and two treatment groups, in an attempt to stimulate their savings behavior. The first treatment group received only a generic text message reminder and the second treatment group received a text message reminder referring to the social capital of the individual. While our results do not point towards a general effect of social capital on account usage and savings, we find strong evidence that women save less and use their accounts less often than men. This is not surprising given that women are less financially included than men across the globe (Demirguc-Kunt et al., 2013).

We provide causal evidence from a randomized field experiment with 2,056 randomly selected clients of the Senegalese subsidiary of MicroCred, a Paris-based provider of financial services for people in low-income countries, that a simple text message reminder referring to the client's social capital has an economically and statistically significant effect on the savings behavior and account activity of women in Senegal, a low-income Western African country. While women tend to save less and to use their accounts less frequently than men, this effect is reversed when they receive a weekly social capital text message reminder. During the four months of the experiment, women that received the social capital text message reminder saved as much as men and became also as active as men in their account usage. As the text message reminders were sent at virtually zero cost, our evidence suggests a simple and cost-effective device to improve financial inclusion of one of the most financially excluded groups: women in low-income countries. On the other hand, a generic text message reminder did not have any effect on men and women, reassuring that the effects we document are not merely the effects of receiving a text message reminder.

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The Effect of Children's Facial Expressions on Donations in the Context of Child Sponsorship Versus One-Time Donation

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EXTENDED ABSTRACT

Past research has shown that people who see children with sad facial expressions experience greater sympathy and donate more to benefit those children than do people who see children with happy facial expressions (Baberini et al. 2015; Small and Verrochi 2009). However, this research has only examined one-time donations and failed to determine the differing impacts of empathic concern and personal distress on donor behavior. The current research fills these gaps by examining the influence of facial expressions on empathic concern and personal distress and the influence of empathic concern and personal distress on donor decisions in the context not only of one-time donations, but also of child sponsorships, a favored children's charity fundraising format in which donors make recurring monthly donations for a child and periodically receive photographs and letters from the child.

The current research hypothesizes that sad facial expressions will evoke greater personal distress than happy facial expressions and that the greater personal distress a child evokes, the more likely donors will be to choose that child. These two hypotheses, taken together, generate a prediction that potential donors will be more likely to choose sad-faced children than happy-faced children because as hypothesized, sad-faced children will evoke greater personal distress, so helping sad-faced children will relieve greater personal distress. The current research suggests that this prediction holds only in the one-time donation context, not in child sponsorships where an additional motivation comes into play: the motivation to avoid future personal distress. Unlike in one-time donations, in child sponsorships, people expect to interact with sponsored children, although not face to face, when they periodically receive photos of the sponsored children and correspond with the children. The correspondence feature of child sponsorship repeatedly exposes sponsors to the child's photographs and letters and thus to possible future long-term personal distress. In one-time donations, people who have experienced personal distress in viewing children are only motivated to relieve that personal distress, whereas the current hypothesis is that in the context of child sponsorship, people are also motivated to avoid future distress anticipated from considering long-term interaction with the children. The two motivations are expected to influence donor choices in opposite directions, canceling each other out. Therefore, in the context of one-time donations, people are expected to prefer to choose to donate to children with sad facial expressions over children with happy facial expressions, whereas the preference for sad-faced children over happy-faced children does not exist in the context of child sponsorship.

Four studies were conducted. In Study 1 with a 2 (facial expression: happy and sad) between-subjects design, participants were shown a photograph of one of eight children who had been selected in the pre-study. The facial expression of the child in the photograph was either happy or sad depending on the facial expression condition. Measurement was taken of personal distress and empathic concern (Batson et al. 1983) experienced by participants toward the child they viewed. The results revealed that sad-faced children evoke greater personal distress than happy-faced children but evoke similar empathic concern as happy-faced children. In Study 2 with a 2 (donation type: one-time donation and child sponsorship) between-subjects design, participants were shown photographs of all eight children selected for use in Study 1 and chose the child they would like to sponsor [child sponsorship condition] or to benefit with their one-time donations [one-time donation condition]. The results revealed that in the one-time donation condition, the percentage of participants who chose sad-faced children was significantly greater than the percentage of those who chose happy-faced children, whereas in the child sponsorship condition, there was a lower percentage of participants who chose sad-faced children than happy-faced children, although this difference was not statistically significant. Study 3 with a 2 (donation type: one-time donation, child sponsorship) between-subjects design showed that children who evoke greater personal distress (sad-faced children) are more likely to get chosen than children who evoke less personal distress (happy-faced children) in one-time donations, whereas personal distress appeared to not influence child choice in sponsorships. Study 4 with a 4 (donation type: one-time donation, normal sponsorship, pen pal sponsorship, financial sponsorship) between-subjects design included different donation types to examine the hypothesis that the correspondence feature of child sponsorship is what neutralizes the preference for sad-faced children seen in one-time donations and renders the influence of personal distress insignificant in normal sponsorships. The results confirmed the hypothesis by showing that the preference for sad-faced children exist only in donation types without the correspondence feature (one-time donation and financial sponsorships), but does not exist in donation types with the feature (normal and pen pal sponsorships).

The current research makes theoretical contributions to the academy. First, it shows that sad facial expressions evoke greater personal distress than happy facial expressions, but not greater empathic concern. Second, it demonstrates that the preference for sad-faced children holds only in one-time donations, but not in the child sponsorship context.

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Disclosure of Covert Marketing Practices: Spill Over Effects on Physician Trust

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EXTENDED ABSTRACT

Covert marketing involves marketing actions whereby consumers believe that the activities are not those of the firm and includes attempts to expose consumers to brands by seamlessly injecting them into contexts not considered as advertising terrain (e.g. news stories). Although past research examined the negative consequences of disclosure of such covert marketing practices on source credibility, the spill over of such disclosure effects to value chain partners is not studied. Using a healthcare setting, we study the disclosure effects within prescription markets where the effects of pharmaceutical industry marketing practices may spill over to physicians.

Our interest lies in examining if the negative effects of disclosure of pharmaceutical industry marketing practices spill over to hurt patient trust in physician. Several high profile cases where pharmaceutical companies have been slapped with hefty fines for their covert marketing practices have surfaced recently. Covert marketing within pharmaceutical industry involves a controversial marketing practice called detailing, where pharmaceutical sales representatives offer incentives to physicians (such as grants for clinical trials) overtly to advance science but covertly to persuade them to write prescriptions that favor their brands. Such practices have received wide publicity in recent years due to several high-profile market failures involving hefty fines on pharmaceutical firms. The Affordable Care Act fuelled this debate further by allowing consumers to visit the Open Payments database and look up how much drug and medical device companies pay doctors in the form of consulting fees, luxury vacations, free lunches, and clinical research among others. Such wide spread covert practices worry policy makers and the American Medical Association that pharma industry influence on physicians compromises patient welfare, threatens physician trust and marginalizes the integrity of the institution of medicine. In response to this concern, several physicians opted to be vocal critics of such practices and adopted voluntary guidelines to ban pharma compensations to their practice.

We propose two distinct processes called subtyping and subgrouping based on categorization theory to motivate competing hypotheses for the spill over of negative disclosure effects from the super ordinate level (value chain) to sub ordinate level (individual physicians).

We conduct two studies using Qualtrics panel, where we manipulated the disclosure of compensation received by physicians from pharmaceutical industry. We measured physician trust and used relationship strength with the physician as a buffer against spill over effects.

Results showed that under high credibility, where the disclosure supports physician integrity, the insulation hypothesis based on sub typing is supported. However, low credibility of physicians where disclosure reveals physicians being compensated by pharma industry impairs physician trust significantly, supporting the spill over hypothesis based on sub grouping. The spillover effects were found to be immune to relationship strength with stronger relationship exacerbating the trust deficit in the low credibility condition. The spillover effects are a serious concern for public policy and academic medicine, where there is a feeling that the profession of medicine, with its fiduciary duty towards patients, is under siege. Our results justify the fears of academic medicine by demonstrating the spillover of negative effects from pharma industry to physicians. It is important that the academic medicine undertake concerted and longitudinal efforts – not just ad hoc measures of banning pharma reps from their premises – to restore trust in medicine.

Our results demonstrate that under low credibility condition, the traditional trajectory of typical healthcare delivery measures alters substantially. The insights provided by extant research are informed by high credibility towards physician and the institution of medicine. We believe our results demonstrate how suspicion introduced into this benevolent environment can substantially alter the pathways. While acknowledging the limitations of a convenience sample, we highlight new pathways in our study that serve as a call for new theories germane to low credibility within healthcare settings. The implications of disclosure effects in such broader theoretical and pragmatic terms are predicated on the hope that future researchers will be motivated to realize its potential for societal marketing theory and practice.

The Impact of Intention to Take a Selfie on Variety Seeking Behavior

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EXTENDED ABSTRACT

Imagine that you are about to choose a box of donuts at Dunkin' Donuts, which is currently running its "Fan of the Week" campaign that engages customers to take a selfie with their donuts. As such, you plan to take a selfie with the donuts you are going to buy. Would such intention to take a selfie influence your purchase decision? Are you more likely to choose more unique flavors of donuts if the purchase occurs during the selfie campaign, compared to a regular non-promotional day?

Despite the growing popularity of selfie in marketing practices, academic research on the effect of selfies on consumer behavior is surprisingly sparse. Prior research on selfies primarily lies in the psychology and communication literature by examining the motivational and personality factors that predict selfie-posting behavior (Barnard 2016; March and McBean 2018). Little attention has been paid to examining the impact of selfies on consumption behavior. A selfie is defined as "a photograph that one has taken of oneself, typically one taken with a smartphone or webcam and shared via social media" (Oxford Dictionaries 2013). In a consumption context, selfies are usually taken *after* the purchase, so that consumers include the products in their selfies. Yet the intention to take a selfie, either encouraged by a firm's promotional campaign or a consumer's own plan for social media sharing, often occurs *before* the purchase finalizes. Thus, the current research investigates how the presence (vs. absence) of the intention to take a selfie impacts consumers' purchase decision, in particular, variety seeking.

Our central thesis is that the intention to take a selfie increases consumers' variety seeking in their product choices. This is likely to occur, because the intention to take a selfie enhances consumers' self-presentational concern, and in turn, increases their variety seeking. As selfie is usually shared through social media, it inherently carries the prospect of being evaluated by others (Vannucci 2017). Such expected evaluation may lead the selfie-takers to have a self-presentational concern, namely, a concern to manage the way they appear to others. We further argue that the self-presentational concern subsequently leads to heightened variety seeking behaviors. This is because people have a naive belief that others view variety in a favorable manner (Ratner and Kahn 2002). For example, prior literature shows that individuals use variety as a means of impression management when their choices are socially observable (Ariely and Levav 2000; Kim and Drolet 2003).

We further identify a boundary condition of the effect. Specifically, the selfie effect diminishes when a group (vs. individual) selfie is intended to be taken. Not all selfies may intensify individuals' self-presentational concern – people often take group selfies with their friends or family (Krämer et al. 2017). As such, the group in the selfie may dilute the viewer's attention to one particular individual, thereby reducing the selfie-taker's self-presentational concern (Diener 1979; Festinger et al. 1952). Such decreased self-presentational concern in the group selfie consequently reduces variety seeking.

Study 1 (N=170) demonstrated the main effect by employing a field experiment of an on-campus free candy event. In the selfie condition, participants were informed that if they took a selfie with lollipops, they would get the lollipops for free. Then they chose three lollipops out of four different flavors and took a selfie with their choices. In the no-selfie condition, participants took three out of the four lollipops without any requirements. As predicted, people in the selfie condition selected more unique flavors ($M = 2.77$) than those in the no-selfie condition ($M = 2.37$; $t(168) = 3.98$, $p < .001$).

Study 2 (N=125) explored the underlying mechanism in the lab. Participants imagined a promotional event of a chocolate brand. In the selfie condition, participants were informed that they would get free chocolate bars if they took a selfie with their choice. Next, they indicated their choice of five chocolate bars from five different flavors. In the no-selfie condition, participants chose chocolate bars without any requirements. All participants then answered questions measuring their self-presentational concern. As expected, participants in the selfie condition ($M = 3.24$) chose greater variety than those in the no-selfie condition ($M = 2.82$; $t(123) = 2.35$, $p < .05$). Furthermore, the mediation analysis revealed a significant indirect effect of intention to take a selfie on variety seeking through self-presentational concern (95% CI: .0060, .2053).

Study 3 offered initial support for the boundary condition by conducting a content analysis of 349 ice cream selfies posted on Instagram over one year (Sep 1, 2017 – Oct 31, 2018). A research assistant blind to the hypothesis coded the type of selfies (individual vs. group) and recorded the number of different ice cream flavors that the selfie-taker held in the photo. As expected, people in the individual selfies held more flavors ($M = 1.50$) than those in the group selfies ($M = 1.16$; $t(347) = 5.642$, $p < .001$).

Study 4 (N=187) tested the boundary condition in the lab. Participants imagined visiting an ice cream store and planning to take either an individual selfie or a group selfie with their chosen ice cream. In the no-selfie condition, they chose the ice cream without considering a selfie. All participants selected five scoops of ice cream from five different flavors. Self-presentational concern was then measured for all participants. A one-way ANOVA revealed a significant effect of the selfie type on variety seeking ($F(2, 184) = 3.71$, $p = .026$). Specifically, participants in the individual-selfie condition chose more flavors ($M = 3.22$) than participants in the group-selfie condition ($M = 2.84$; $F(1,184) = 5.24$, $p = .023$) and those in the no-selfie condition ($M = 2.80$; $F(1,184) = 6.19$, $p = .014$), with no significant difference between the latter two ($F < 1$). Furthermore, the mediation analysis showed a significant indirect effect of the intention to take a selfie on variety seeking through self-presentational concern (95% CI: .0020, .0991).

This research adds to the literature on variety seeking and user-generated content and provides practical insights for marketing communications that incorporate consumer selfies.

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How Exposure to Visual Glitches Influences Consumers' Morality Judgments

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EXTENDED ABSTRACT

Imagine Sarah is shopping for some beverages in a grocery store. She cannot help but notice that although a row of juice products is almost aligned in one orientation on the shelf, one juice bottle stubbornly faces toward a different direction. Does exposure to this row of "almost perfectly arranged" products influence Sarah's subsequent, unrelated morality judgments? In the present research, we introduce a novel visual cue that is prevalent in our lives — visual glitches, defined as an unexpected outlier that breaks a unified, integrated, and harmony pattern in visual presentation.

Derived from aesthetics and art design literature (Moradi 2004; Davis 2011; Betancourt 2016), the concept of visual glitch refers to an artifact resulting from an error and more specifically the visual manifestation of that error. Various forms of glitches have the potential power to break an expected flow or pattern (Menkman 2011). Since visual glitches feature a minor error, people may generate a need to correct the error because people also have an intrinsic need to make things right and orderly (Loewenstein 1987). On the other hand, things are judged less moral when individuals' self-discipline (Steim and Nemeroff 1995), social norms (Samper, Yang and Daniels 2018) or moral standards (Bandura 1991; Tsang 2002) are violated. Thus, immoral judgments reflect a recognition of an error or wrongdoing which breaks an expected mental pattern. It stands to reason that people also have a need to correct immoral behavior. Moreover, based on motivational and goal theories, goal fulfillment can occur by having the opportunity to behave in line with a goal (Wilcox et al. 2009). This indicates that exerting harsher moral judgments provides an opportunity to achieve the correction goal, which was activated, but was not gratified in the visual domain. Thus, we predict that an unfilled need for correction in the visual domain can be fulfilled alternatively in the morality domain.

We hypothesized that exposure to visual presentation with glitches (vs. without glitches) leads consumers to form harsher moral judgments, judge a morally controversial behavior to be less moral, and evaluate a brand with poor CSR records more negatively.

In study 1, participants were asked to judge some morally controversial behaviors (e.g., "Jane returned the expensive outfit and asked for a full refund after wearing it in an important social event.") after being presented with pictures with/without visual glitches. Results show that participants who were presented with glitch-present pictures (e.g., in one picture, nine of ten bottles of olive oil are perfectly arranged on a shelf and the remaining one bottle looks slightly askew) made harsher moral judgments than those who were presented glitch-absent pictures (e.g., the olive oil bottles are perfectly arranged).

In study 2, participants were exposed to a bidding task after the visual manipulation which was the same as study 1. Participants were informed that the research lab had teamed up with a local restaurant and that students had an opportunity to bid on a gift card (the face-value is $50.00) of the restaurant. They were also provided with the information that this newly-opened restaurant had received a backlash because it occupied a public space which was previously planned for community uses (e.g., a library). After that, participants were asked to indicate the amount of money they would like to bid for gift card. After the bidding, participants responded to morality judgments measures. Results show that bidders in glitch-present condition bid less money and made harsher moral judgments than bidders in glitch-absent condition. A mediation effect also confirmed the effects of visual glitches on consumers' bidding prices were mediated by harsher moral judgments.

In study 3, the design, procedures, and scenarios remain similar to study 1 except that we added a "messy" condition featuring pictures of disordered, messy product displays in order to examine if visual disorders will induce a similar effect. Besides, we examine the mediating role of need for correction. As confound checks, we measured participant's current mood, anxiety, and perfectionism. Results show that participants made harsher moral judgments only in glitch-present condition rather than in glitch-absent and messy condition. Mediation analysis indicates that need for correction mediated the effects of visual glitches on moral judgments. We ruled out Perfectionism, Anxiety, and Mood as alternative explanations.

In study 4, we provided participants with a chance to correct the visual glitches before they make moral judgments. Specifically, in "glitch-present, correction-allowed" condition, participants received three constructed LEGO models with one brick misaligned in each model. Participants were told that for each model, they were allowed to move a brick until they feel good with its look. In "glitch-present, correction not-allowed" condition, participants were told that they were not allowed to move any brick. In the control condition (glitch-absent), participants received LEGO models with all bricks aligned perfectly. After that, we asked participants to evaluate brands with poor CSR records (e.g. West Jeans Factory hires child labor; adapted from Ashton and Lee 2008; Reczek, et.al. 2018) and to answer moral judgment questions (same as used in prior studies), and the need for correction measures. Results confirmed our prediction that when providing participants with a chance to correct the glitches before making judgments, the effects of visual glitches disappeared.

This research proposes a novel visual factor: visual glitches. We contribute to the literature on visual processing and moral judgment by demonstrating that visual glitches induce a need for correction, which in turn impacts moral judgments. Such judgments lower consumers' subsequent evaluations of brands with poor CSR records and led consumers to bid less on the gift cards from those brands. We also identified the boundary conditions for our findings such that the effects of visual glitches only occur when the glitches can be easily fixed and when consumers have no chance to correct them.

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When Intention to Share Increases Variety-Seeking: The Role of Self-Enhancement

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EXTENDED ABSTRACT

Given the ubiquitous use of social media, consumers increasingly share their experiences and consumptions both online and offline (e.g., Berger and Schwartz 2011; Chen 2017; Dubois et al. 2016). To leverage this momentum, a growing number of brands explicitly encourage people to share content about products and services both offline and online, for instance, by deftly including sharing buttons to trigger more page views. The current work investigates a simple yet critical question: can merely triggering one's intention to share alter one's decision-making, and if so, how?

Building on a nascent literature examining how consumers' intention to share affects consumption outcomes such as experience enjoyment (Barasch, Zauberman and Diehl 2018), we propose and find that activating intention to share during the choice process can increase consumers' tendency to seek variety, a stimulating and rewarding choice feature (Kahn and Ratner 2005) that people typically view as positive (Ratner and Kahn 2002). We further argue that this effect occurs because activating intention to share triggers the motive to self-enhance to which individuals respond to by seeking more variety as a signaling tool in the service of self-enhancement. That is, we propose that a prompt to share content (e.g., one's purchase) without any further information may activate the need to self-enhance. Given consumers often strategically use the choice process – and particularly variety-seeking (Ratner, Kahn, and Kahneman, 1999; Simonson, 1990), which often suggests adaptive values, such as being balanced, uniqueness, and having varied tastes – all desired traits (Kim and Drolet 2003), as an instrument to bolster desired positive identities such as their uniqueness to others (e.g., Ariely and Levav, 2000; Kim and Drolet 2003), we hypothesize that making intention to share salient *during* the decision process *increases* consumers' variety-seeking tendency (H1).

We probe the role of consumers' need to self-enhance by examining two critical moderators respectively tied to choice context and consumer knowledge, respectively: product conspicuousness, and consumer expertise. First, conspicuous options have a strong signaling function (e.g., Dubois et al. 2012; Wang and Griskevicius 2014). Compared to inconspicuous options, conspicuous options trigger heightened consumer self-esteem (Berger and Heath 2007) by giving customers a means to communicate their actual or desired wealth or prestige. Thus, we reasoned that providing an alternative means of satisfying their need to self-enhance should reduce the positive effect of intention to share on variety-seeking. That is, the effect of intention to share on variety-seeking may reduce when the option is conspicuous (vs. not conspicuous) (H2).

Second, expert consumers, contrary to non-experts, typically draw from their own knowledge rather than from external features of the choice to self-enhance. Indeed, consistent preferences tend to be more self-relevant and reflect greater knowledge in the target domain (Krosnick 1988), and less varied choices are associated with greater attitude strength (Bohner and Dickel 2011; Krosnick et al. 1993), a hallmark of expertise (Alba and Hutchinson 1987). Thus, if experts are associated with less (vs. more) variety, they may be less sensitive to variety-seeking when aiming to enhance their self. That is, the effect of intention to share on variety may reduce for expert (vs. non-expert) consumers (H3).

Five laboratory studies test the effect of intention to share on variety-seeking and probe the role of self-enhancement through mediation and moderation. Following prior work (Etkin 2016; Ratner et al. 1999; Simonson 1990), we measure "variety" as the number of distinct items selected in a simultaneous choice.

Study 1A

Study 1a tested whether inducing consumers to think about sharing their purchase increases variety seeking. We tested whether the *mere presence* of a sharing button would boost variety seeking by activating participants' intention to share. In an auxiliary pretest, a separate sample of 100 participants from MTurk (37.0% female; M_{age} = 33.29 years, SD = 8.24) rated whether sharing buttons activated their intention to share on four items (e.g., "To what extent did you want to share your experience with others?" "How much did you think about sharing a potential purchase with others?" [1 = "not at all," and 7 = "very much"], α = .93). A one-way ANOVA revealed that participants had greater intention to share their purchase in the intention to share condition (M = 4.62, SD = 1.63) than in the control condition (M = 3.79, SD = 1.69; $F(1, 98)$ = 6.22, p = .01, d = .38). 428 participants were randomly assigned to either an intention to share or a control condition. We coded variety seeking to reflect the numbers of different flavors (1-12). There was a significant effect of intention to share on variety seeking ($F(1, 426)$ = 17.74, p <.01, d= .58), such that participants sought more variety in the intention to share condition (M=6.66, SD=3.38) than in the control condition (M=5.45, SD=2.49).

Study 1B

Study 1b aimed to provide convergent evidence for the effect that intention to share boosts variety-seeking, using a real choice in a laboratory setting and test the role of self-enhancement. We used a similar intention to share manipulation and directly measured self-enhancement. 124 participants were randomly assigned one of two conditions. Participants were told they would actually get the item(s) chosen at the end. After the choice, we assessed participants' motives to self-enhance using three items adapted from Chen (2017) and Dubois et al. (2016). A one-way ANOVA revealed a significant effect of intention to share ($F(1, 122)$ = 8.45, p <.01, d=.74), such that participants sought more variety in the intention to share condition (M=5.56, SD=1.31) than in control condition (M=4.82, SD=1.52). Furthermore, the indirect effect through self-enhancement was significant (95% confidence interval CI= [.081, .510], 5000 samples; see figure 1).

Study 2

In Study 2, we activated intention to share by prompting participants to write about what they would share on Weibo in a different context (travel package). 462 participants were randomly assigned to a 3 (intention to share: focus on share vs. focus on do vs. control) × 3 (destinations: Xiamen, Guilin and Beijing) mixed design, with intention to share as a between-subjects factor and destination as a within-subjects factor. Across destinations, participants sought more variety in the focus on share condition than in other conditions (72.59% vs. 59.31% vs. 60.04%; c (2) =22.17, p<.01). Specifically, participants sought more variety after reflecting on they would share compared to reflecting about what they would do or no reflection (c (1) =18.01,

$p<.01$; c (1) =16.25, $p<.01$, respectively). The two baseline conditions did not differ (c (1) =0.05, $p>.05$).

Study 3

Study 3 examined whether the effect is reduced when the purchase is conspicuous (vs. inconspicuous). 145 participants were randomly assigned to a 2 (intention to share: share vs. control) × 2 (option conspicuousness: high vs. low) between-subjects design. We varied the descriptions of two travel packages involving European destinations (Bellezza, Paharia, and Keinan 2017). The intention to share manipulation was the same with Study 2. A binary logistic regression regressed participants' choice on intention to share, conspicuousness, and their interaction. The effect of intention to share (Waldc^2=5.50, p=.02) and the intention to share × conspicuousness interaction (Waldc^2=4.78, p=.03) were both significant. Within the non-conspicuous options, participants in the intention to share condition were more likely to choose multiple (79.49%) than single (20.51%; Waldc^2=4.93, $p<.05$) options. However, within the conspicuous options, the percentage of participants who chose multiple options did not differ across the intention to share (54.55%) and control (64.86%) conditions (Waldc^2=.77, p>.1).

Study 4

Study 4 tested whether expertise moderates the effect of sharing potential on variety seeking. 119 participants were randomly assigned to an intention to share or a control condition with measuring expertise. Participants were told that Netease Music was holding a music ranking activity and needed their help to choose three songs from three popular singers. In the intention to share (control) condition, the activity was: "Share (Treasure) pleasant music moments". Participants chose three songs they would share with others (they liked most). We regressed the number of singers on intention to share, mean-centered expertise score, and their interaction. There was no effect of intention to share (β=-.036, t =.404, $p>.05$) and a main effect of expertise (β=-.252, t =-2.809, $p<.01$, d=.52). Crucially, there was a significant interaction between intention to share and expertise (β=.398, t =3.46, $p<.01$, d=.87). Intention to share positively predicted variety-seeking at + 1SD above the mean expertise (β=.219, t=2.27, $p<.05$, d=.45), but negatively predicted variety-seeking at – 1SD below the mean expertise (β=-.266, t=-3.218, $p<.01$, d=.55).

General Discussion

Across five laboratory and online studies using different contexts, including chocolates/candies (Study 1a and Study 1b), trips (Study 2 and Study 3), and music preference (Study 4), we examine how intention to share influences variety-seeking. The results demonstrate that intention to share *during* the decision process activates the motive to self-enhance, leading consumers to seek variety (Study 1a, Study 1b, and Study 2). Furthermore, the effect of intention to share on variety-seeking is reduced when the consumption is viewed as conspicuous compared to non-conspicuous (Study 3). We also show that domain expertise alters the effect, with low expertise leading to more variety-seeking when consumers are prompted to share with others (vs. no sharing; Study 4).

Overall, this research makes several important contributions. First, this work complements recent work on how social and contextual factors influences sharing *after* consumption (e.g., Berger and Schwartz 2011; Chen 2017; Dubois et al. 2016) by showing that intention to share *during* the decision process can influence consumption through variety-seeking. Importantly, these findings show that one's mere intention to share, rather than actual sharing of information, can affect one's decision making. Second, our find-

ings complement prior work demonstrating that consumers tend to choose variety in public (Ariely and Levav 2000; Ratner and Kahn 2002), by delineating when and how consumers may view and use variety to meet their goals. Third, we provide novel evidence that self-enhancement not only alters what people share (e.g., Dubois et al. 2016) but also imbue decisions subsequent to consumers' mere intention to share. Notably, by showing that the effect is alleviated among experts, we contribute to a growing body of work delineating the differences in decision-making between experts and non-experts (e.g., Aner et al. 2017; Clarkson et al. 2013).

Managerially, the findings shed light on how intention to share can be easily activated through implicit cues beyond specific audiences. In particular, social plugins such as share buttons are a key medium to get content shared via social media, email, and other online channels (e.g., Wesley 2017). Providing share buttons may do more than just nudge consumers to use them to share content and even subtly alter what they end up choosing.

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Instagrammably Visual: The Impact of Social Media Logos on Aesthetically-Driven Consumption

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EXTENDED ABSTRACT

Social media platforms are highly ubiquitous in the daily lives of consumers. Particularly, it has recently become common for commercial websites and flyers to include social media logos (e.g., Tuten and Solomon 2017), which invite consumers to visit their own social media sites and share their experiences with peers (Guffey and Loewy 2012). Although such logos might at first be deemed independent of purchase decisions, we challenge this naïve perception and ask: can exposure to social media logos drive consumers' decision making? If so, how and why?

Visual logos may trigger particular behaviors via priming (e.g., Jiang et al. 2014; Fitzsimons et al. 2008). Social media platforms, due to their asynchrony and photo-uploading functions, may serve as an excellent tool for self-presentation (DeAndrea and Walther 2011; Strano 2008). By connecting these two distinct literatures, our work makes a novel proposition: exposure to social media logos in ads could induce a public mindset, whereby consumers attend to how others view them and are motivated to impress others spontaneously. Because of the public mindset, we propose that social media logos could increase visually (vs. gustatorily- or olfactorily) superior product choices, since visual qualities are more easily transferable online, even without direct contact with tangible objects, and would thereby be more effective for impression management (e.g. Diaconu 2006; Stevenson and Case 2005).

Four studies collectively support our theorizing. Study 1A (N = 201) employed a single factor (social media logo: logo absent vs. just logos vs. logos and sharing message) between-subjects design. We first pretested 31 pairs of images of pastas and hamburgers (N=62), whereby each item's prettiness and tastiness were measured. Importantly, to manipulate perceived taste, we added a yellow star at the upper left corner of some aesthetically-inferior items and told participants that starred items are recommended as delicious. One pair of pasta dishes and another pair of hamburgers were selected as the main stimuli, whereby one item in each pair was prettier yet less tasty than the other item (all $ps < .002$). We then placed these images on a fictitious café menu and manipulated the presence of social media logos (Instagram and Facebook), thereby creating three versions: 1) logo absent, 2) just logos, and 3) logos and "share your experience" message. Participants saw one of the menu versions and chose one of the four food items. Results revealed significant differences among the three conditions in participants' prettier (vs. tastier) food choices (Mlogos and message = 55% vs. Mjust logos = 43% vs. Mlogo absent = 33%; $\chi2 = 6.18$, $p =.045$). The difference between the logos and sharing message condition and the logo absent condition was significant ($\chi2 = 6.03$, $p =.018$). More importantly, when the two logo present conditions were collapsed, participants in the logo present condition (Mlogo present = 49%) made significantly higher prettier choices than those in the logo absent condition ($\chi2 = 4.32$, $p = .038$), thereby validating the basic effect.

Study 1B (N = 294) employed a single factor (logo: social media logos vs. company's logo vs. logo absent) between-subjects design. By using flower bouquets instead of food items, we examined whether the effect would also hold in the 'visual vs. olfactory' domain. By including the 'the company's logo' condition, we also tested whether the effect was specifically driven by social media logos. We pretested 21 flower bouquet pictures (N=51) and selected a pair of bouquets as the main stimuli, where one bouquet was again prettier yet less fragrant than the other ($ps <. 002$). Participants saw one of the three versions and decided between the two flower bouquets. As predicted, participants in the social media logos condition displayed significantly higher visually superior choices than those in the logo absent condition and in the company's logo condition (Msocial media logos = 71% vs. Mcompany's logo = 54% vs. Mlogo absent = 56%; $\chi2 = 7.37$, $p =.027$). Importantly, there were no differences between the latter two conditions ($\chi2 = 0.08$), suggesting that only social media logos triggered the effects.

Study 2 (N = 292) had a fictitious cake shop as the experimental context and employed a single-factor (social media logo: logo present vs. logo absent) between-subjects design. Two pairs of cakes were selected as the main stimuli (all $ps <.05$). In addition to the cake choice, participants also answered a 7-point question asking how heavily they used social media. Again, participants in the logo present condition displayed a greater percentage of prettier cake choice than those in the logo absent condition (Mlogo present = 33% vs. Mlogo absent = 17%; $\chi2 = 9.9$, $p =.002$). More importantly, there was a significant interaction between social media logos and heaviness of social media usage ($z = 2.32$, $p = .021$), such that heavier social media users were more affected by the presence of social media logos.

Study 3 (N = 478) employed a 2 (social media logo: absent vs. present) x 3 (consumption context: public vs. control vs. private) between-subjects design. The same cake shop was again used as the stimuli, albeit with just one pair of cakes. Importantly, we manipulated the privacy of consumption context such that participants imagined buying a cake for their own private dinner, for just a dinner, or for a dinner with friends invited. As anticipated, we found a significant interaction between social media logos and consumption context (Wald $\chi2 = 4.72$, $p = .029$). In the private consumption condition, the effect of social media logos was eliminated (Mlogo present = 16% vs. Mlogo absent = 21%; $\chi2 = 0.78$, $p =.37$), although the effects were replicated in the public and control conditions (all $ps < .03$). In addition, social media logos per se did not significantly influence perceived prettiness of both cakes ($ps = ns$), thus enabling us to rule out the alternative aesthetic sensitivity account.

Together, the current research uncovers a novel effect that exposure to social media logos results in visually superior choices, driven by the public mindset and moderated by consumers' heavy usage of social media platforms.

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Consumers' Beliefs about the Effects of Trade

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EXTENDED ABSTRACT

Products increasingly originate from foreign countries, leading to efficiencies that benefit the economy broadly and the poorest consumers especially. Even though these facts are widely accepted by economists (IGM Forum 2012), many non-economists do not seem to appreciate these benefits (Caplan 2006). What causes these diverging attitudes?

We test the possibility that anti-trade beliefs are due to *intuitive mercantilism*—the belief that money has value over-and-above what it can purchase (Johnson, Zhang, and Keil 2018). We test four implications of this account—that imports are seen as harmful (Study 1) and exports as beneficial (Study 2), that this harm translates into moral judgments (Study 3), and that these effects can be attenuated by emphasizing the *balance-of-payments* across countries (Study 4).

Study 1. American participants (N=144) read about ten transactions (e.g., "Some people, who live in the United States, order pairs of Nike running shoes from [*location*]. They each pay $150 for the shoes and receive them in the mail"). Six items varied whether the purchase was from a domestic source, a developing country, or a developed country. For each transaction, participants rated the effect on the welfare of the United States ("How well off do you think the United States now is") on a scale from -5 ("Worse than before") to 5 ("Better than before").

Contrary to basic economics, participants often judged foreign transactions harmful to the U.S. (Table 1). Whereas only 13% of domestic transactions were seen as harmful, many more purchases from developing and developed countries (39% for each) were deemed harmful (ps<.001).

If this bias represents a fundamental misunderstanding about trade, then it should also occur in non-politicized contexts such as domestic trade. To address this question, four items described transactions in which consumers residing in a particular state made purchases from either the same or a different state. Consistent with the idea that consumers fundamentally misunderstand trade, 22% of across-state trades were deemed harmful, compared to only 13% within-state (p=.003).

Study 2. Study 2 tests whether, consistent with mercantilism, *selling* countries are seen as benefitting as the buying countries are harmed. Participants (N=144) completed the same task as Study 1, but reported beliefs about the *selling* rather than buying countries.

The pattern was the opposite of Study 1, and consistent with mercantilist thinking. Whereas 63% of domestic transactions were seen as benefitting the U.S., a larger proportion of exporting countries (75% and 81%) were seen as benefitting from sales to the U.S. (p=.002 and p<.001). Developed rather than developing countries were also judged likelier to benefit (p=.002), perhaps because people believe that trade exploits developing countries.

Study 3. Would these judgments of harm lead people to view foreign purchases as *immoral*? Participants (N=145) completed the same task as Study 1, but made moral judgments ("Please rate the morality of these people's actions") on a scale anchored at -5 ("Morally bad"), 0 ("Neither good nor bad"), and 5 ("Morally good").

Whereas domestic transactions were infrequently seen as immoral (15%), condemnation was more frequent for foreign purchases, both from developed (23%; p=.003) and especially from developing countries (36%; p<.001). The difference between developing and developed countries was also significant (p<.001), probably because trades with developing countries are seen as exploitative and thus lose–lose.

These results raise problems for marketing foreign goods, particularly from developing countries. If consumers view foreign transactions as *immoral*, they may incorporate this moral cost into their utility calculus and underconsume foreign products. This poses challenges for international firms and may lead to allocative inefficiencies.

Study 4. In Study 4, we tested (a) whether these effects hold up in first-person rather than third-person contexts; (b) whether they translate into willingness-to-pay; and (c) whether a simple framing manipulation could moderate the effects. Specifically, we tested whether highlighting the fact that currency inflows and outflows balance (Hume 1752) would, by fighting directly against the mercantilist model of trade, attenuate the belief that imports are harmful.

Participants (N=282) evaluated products from the U.S., a developing country, or a developed country. In the *resource-efficiency* condition, the savings to the consumer were emphasized ("An economist calculated that the dollars used to purchase this product are mainly used by the seller and by financial intermediaries to purchase U.S. products and invest in the U.S. economy"); in the *balance-of-payments* condition, the neutrality of money was emphasized ("An economist calculated that the manufacturer's cost savings on this product tend to be passed on to consumers, who can use those dollars to purchase other products"). Even though both arguments are economically correct, we expected the balance-of-payments frame to be more effective at improving customers' perceptions of harm.

Consistent with predictions, the Origin→Harm→Morality→WTP pathway was significant in the resource-efficiency condition when comparing domestic products versus those from developing countries [b = –0.032, 95% CI: –0.063 to –0.008], although not for developed countries [b = –0.005, 95% CI: –0.020 to 0.013]. However, these effects were moderated in the balance-of-payments condition. Product origin had a significantly smaller effect on perceived harm in the balance-of-payments condition [$t(281)$ = 3.48, $p < .001$, $d = 0.19$] and the serial mediation pathway on WTP was significantly weaker [b = –0.004, 95% CI: –0.004, 95% CI: –0.010 to –0.000]. This not only provides direct evidence that these effects are due to intuitive mercantilism (since providing the contrary intuition diminishes the effect of product origin), but also hints at possible ways to attenuate anti-trade biases.

Implications. These results have implications for political economy and for marketing. Public choice theorists have noted that voters with systematically biased economic beliefs are likely to elect politicians who adopt unwise policies (Caplan 2006). To the extent that simple interventions can help voters to understand the benefits of trade, this may lead to better political and economic outcomes. These results may also be useful to marketing practitioners who aim to design messages improving the perception of their products' benefits to society. Such advertising interventions could help consumers to become more economically literate as well as financially better off.

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Dimensions of Altruism: Do Evaluations of Charitable Behavior Track Prosocial Benefit or Personal Sacrifice?

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EXTENDED ABSTRACT

The term *altruism* has a double-meaning. 'Altruism' refers to behavior that produces prosocial benefits (e.g., curing a child's blindness). But 'altruism' can also refer to personal sacrifice (e.g., giving $100). Altruistic effectiveness and sacrifice are not always correlated, and the *effective altruism* movement encourages people to focus on the effectiveness of their donations (MacAskill 2015; Singer 2015). For example, Singer notes that it costs $40,000 to train a single seeing-eye dog, while the same donation could *cure* blindness in 400 people in developing countries. While it may produce more social benefit to donate $1,000 to cure 10 people's blindness rather than $40,000 to train a seeing-eye dog, people may think the latter act more praiseworthy because it entails a greater sacrifice.

In the current studies, we test these intuitions. Specifically, we hypothesized that people would attend to sacrifice, using it as a cue to both the praiseworthiness of an act and to broader moral character, but would neglect effectiveness (Study 1). We hypothesized that this would occur because moral judgments serve to identify individuals likely to cooperate (Uhlmann et al., 2015), and personal sacrifice may signal willingness to make future sacrifices. In that case, people should attend less to sacrifice when the donor has an established moral character (Study 2). We also tested whether these intuitions would apply equally to in-group versus out-group donations (Study 3).

Study 1. Participants (*N*=533) read about a donation benefiting people in developing countries. The donations involved a *low*, *moderate*, or *high* monetary contribution (to manipulate personal sacrifice), and were *low* or *high* in effectiveness (to manipulate social good), with both manipulations between-subjects. These conditions always differed from one another by one order of magnitude (a factor of 10). For example:

> Julia decided to make a donation to charity. She donated [$20/$200/$2000] to a charity focused on international health. Her donation was used to cure [a child's/10 children's] blindness in Ethiopia.

Participants rated the praiseworthiness of the action and the actor's moral character on 0–10 scales.

There was a significant main effect of contribution, b=0.40, *SE*=0.11, 95%CI[0.18,0.61], p<.001, but not effectiveness, b=0.08, *SE*=0.07, 95%CI[–0.06,0.22], p=.26. Thus, people take account of personal costs, but not social benefits, in evaluating donations. The results were similar for character judgments: Character tracked contribution, b=0.45, *SE*=0.12, 95%CI[0.21,0.69], p<.001, but not effectiveness, b=0.02, *SE*=0.08, 95%CI[–0.14,0.18], p=.82. Thus, these results support the idea that personal cost but not social benefit signals reputation.

Study 2. Study 2 tests this mechanism directly by giving participants information about the donor's moral character. This should attenuate the effect of personal sacrifice.

Participants (*N*=509) read the same vignettes, altered to establish the actor's altruistic moral character (e.g., stating that the donor donated 30% of his salary each year to various causes).

For character judgments, there were no significant effects for any of the variables (*p*s>.12), demonstrating that our manipulation successfully eliminated the diagnosticity of the specific donation for character. For praise judgments, there was a significant effect of contribution, b = 0.25, *SE* = 0.10, 95% CI[0.06,0.44], p = .009, albeit weaker than in Study 1, consistent with our proposed mechanism. The interaction between character information (Study 1 or 2) and contribution amount was significant, b=–0.19, *SE*=0.08, p=.015, 95%CI[–0.34,–0.04]. In a moderated mediation analysis (Hayes, 2013), there was an indirect effect of contribution on praise judgments via character judgments for Study 1, b = 0.23, *SE* = 0.07, 95% CI[0.10,0.36], but not Study 2, b=0.03, *SE*=0.04, 95%CI[–0.05,0.12], leading to a significant index of moderated mediation, b=–0.20, *SE*=0.08, 95%CI[–0.35,–0.05]. Thus, character judgments mediate the effect of contribution magnitude on praise judgments only when information about the actor's moral reputation is unavailable.

Together, Studies 1 and 2 tell a clear story about moral evaluations of prosocial acts. Without evidence of reputation, prosocial behaviors are evaluated mainly by considering their personal sacrifice, rather than the social benefit. This occurs because personal sacrifice is a controllable and visible signal of cooperativeness and thus a useful input to reputational judgments. Thus, when reputation is available, personal sacrifice is less relevant to moral evaluations.

Study 3. Study 3 tested whether people would continue to discount social benefits for donations benefitting the in-group (Americans).

Participants (*N*=563) responded to the same items used in Study 1, except the donations benefitted recipients in the United States.

There was a large effect of contribution on praise judgments, b=0.39, *SE*=0.09, 95%CI[0.21,0.57], p<.001, but only a marginal effect of effectiveness, b=0.11, *SE*=0.07, 95%CI[–0.02,0.24], p=.09. Thus, Study 3 replicated the key results of Study 1: Personal sacrifice mattered greatly, while social good had at most a marginal effect. Parochialism does not appear to be a boundary condition.

Implications. These results have important implications for charitable giving. In common contexts where people are considering donations individually, they are liable to totally neglect effectiveness and focus exclusively on the degree of sacrifice. This is mixed news for effective altruism: There may be little signaling value to donating *effectively*, but a great deal of signaling value to donating a *lot*. Future work should test interventions, such as directly comparing donations rather than judging donations one at a time, that might encourage people to attend to social benefit in evaluating others' donations, which may in turn motivate donors to contribute effectively.

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Motivational Theory of Gendered Consumption

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EXTENDED ABSTRACT

Desires for gendered choices have been routinely viewed as gender-congruent (Palan 2001), driven by gender identity (Palan 2001), and solidified by traditional gender norms (Gal and Wilkie 2010; Thompson and Ustuner 2015). However, a new wave of consumption has emerged in which heterosexual and gender binary consumers engage in gender-incongruent consumption (Arsel and Bean 2012; Courtney 2009). Unfortunately, existing theories of gendered consumption are unable to account for these gender-incongruent choices. An alternative theory for understanding gendered consumption is offered to account for these gender-incongruent choices in addition to gender-congruent choices.

Building on the associations between masculinity and agency, and femininity and communion (Hogan 1983; O'Brien and DeLongis 1996), we suggest that consumers view masculine and feminine choices as mediums of agency and communion, and that agentic motives (striving for mastery, independence, and achievement) drive masculine choices, and communal motives (striving for connection, nurturance, and warmth) drive feminine choices.

STUDIES 1A and 1B

Study 1A compares the effects of masculine gender identity versus agency in explaining consumers' masculine choices.

Participants, Design, and Procedure. Two hundred and thirty-three students took part in a 3 (conditions: control, low-agency, low-masculinity) × 2 (sex: male, female) design. Participants recalled a performance failure at a job (low-agency) or received bogus feedback informing them of their low masculinity score (low-masculinity), and participants in the control condition described a typical day of their life. Then, participants viewed a pretested masculine product (i.e., black sofa) and expressed purchase intentions.

Results. A two-way ANOVA analysis showed significant main effects of conditions ($M_{control}$ = 4.24, $M_{low-agency}$ = 5.51, $M_{low-masculinity}$ = 5.26, $F(2,227)$ = 5.96, p = .003 , η^2 = .050) and sex (M_{male} = 6.09, M_{female} = 3.91, $F(1,227)$ = 46.83, p <.001, η^2 = .171) on desire to purchase a masculine product. In the low-agency condition, men ($M_{control}$ = 4.97, $M_{low-agency}$ = 6.37, $F(1,154)$ = 5.99, p = .016, η^2 = .037) and women ($M_{control}$ = 3.50, $M_{low-agency}$ = 4.65, $F(1,154)$ = 4.30, p = .040, η^2 = .027) indicated higher purchase intentions toward the masculine product than participants in the control condition. However, low-masculinity only led to a boost in men's purchase intentions toward the masculine product ($M_{control}$ = 4.97, $M_{low-masculinity}$ = 6.94, $F(1,66)$ = 14.65, p < .001, η^2 = .182), it did not affect women's purchase intentions ($M_{control}$ = 3.50, $M_{low-masculinity}$ = 3.58, $F(1,79)$ = .023, p = .88, η^2 = 0), compared to the control.

Study 1B compares the effects of feminine gender identity and communion in explaining consumers' feminine choices.

Participants, Design, and Procedure. Two hundred and twenty-five students were randomly assigned to a 3 (conditions: control, low-communion, low-femininity) × 2 (sex: male, female) design. Participants recalled a failure in a romantic relationship (low-communion), received a bogus feedback informing them of their (low femininity) score, or described a typical day of their life (control condition). Then, participants viewed a feminine product (i.e., white sofa) and expressed purchase intentions

Results. A two-way ANOVA analysis showed that there were significant main effects of conditions ($M_{control}$ = 3.82, $M_{low-communion}$ = 5.06, $M_{low-femininity}$ = 4.81, $F(2,219)$ = 4.57, p = .011, η^2 = .040) and sex (M_{male} = 3.55, M_{female} = 5.58, $F(1,219)$ = 32.57, p < .001, η^2 = .129) on willingness to purchase a feminine product. The interaction of sex and conditions on purchase intentions was marginally significant ($F(2,219)$ = 2.62, p = .075, η^2 = .023). Further, both men ($M_{control}$ = 3.14, $M_{low-communion}$ = 4.25, $F(1,137)$ = 3.04, p = .083, η^2 = .022) and women ($M_{control}$ = 4.49, $M_{communion threat}$ = 5.87, $F(1,137)$ = 5.11, p = .025, η^2 = .036) indicated higher purchase willingness to purchase a feminine product in the communion threat condition compared to the control condition. However, femininity threat led to a boost in women's purchase intentions toward the feminine product ($M_{control}$ = 4.49, $M_{low-femininity}$ = 6.38, $F(1,158)$ = 6.02, p = .015, η^2 = .037), it did not affect men's purchase intentions ($M_{control}$ = 3.14, $M_{low-femininity}$ = 3.25, $F(1,158)$ = .35, p = .55, η^2 = .002), compared to control.

STUDIES 2A and 2B

These studies provide evidence for the effects of agency on the willingness to participate a masculine activity (Taichi) in 2A and communion on the willingness to participate in a feminine activity (Yoga) in 2B and the underlying mechanisms.

Procedure. Participants, 263 (study 2A) and 290 (study 2B), were randomly assigned to low-agency and low-communion conditions via recall tasks (Horowitz et al. 2001) and control condition via recalling daily life experiences. Participants viewed advertisements for Taichi (2A) and Yoga (2B) retreats, they indicated their desires to participate in the retreats and expressed to what extent they thought that participation in those retreats would provide them with senses of agency (2A) and communion (2B), respectively.

Results. An ANOVA analysis showed that there were main effects of low-agency on increasing consumers' willingness to participate in a Taichi retreat ($M_{Low-agency}$ = 5.24, $M_{Control}$ = 4.22, $F(1,260)$ = 9.27, p =.003 , η^2 = .03) in 2A and the low-communion on boosting desires to participate in a yoga retreat ($M_{Low-communion}$ = 6.12, $M_{Control}$ = 5.25, $F(1,287)$ = 8.08, p = .005, η^2 = .03) in study 2B. There were significant effects of the manipulations on the perceptions of agency provided by the masculine choice ($M_{Low-agency}$ = 5.88, $M_{Control}$ = 5.21, $F(1,260)$ = 7.43, p = .007 , η^2 = .03) in 2A and on the perceptions of communion provided by the feminine choice ($M_{Low-communion}$ = 5.96, $M_{Control}$ = 5.29, $F(1, 287)$ = 8.53, p = .004, η^2 = .03) in 2B. The mediation results suggested that participants' higher willingness to participate in both retreats was due to the perceptions that these retreats would provide them with a higher sense of agency (**β = .56, SE = .21,**) in 2A and communion in 2B (β = .57, SE = .19,).

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Presenter's Paradox?: Downstream Consequences of Non-Truthful Communication

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EXTENDED ABSTRACT

This paper builds on the literature on consumer morality and previous examinations of factors that drive communicators to avoid being truthful (Argo, White, and Dahl 2006; Sengupta, Dahl, and Gorn 2002), tactics they use to avoid the truth (Kang, Packard, and Wooten), and some downstream consequences of their non-truthful behavior (Argo and Shiv 2012; Bickart, Morrin, and Ratneshwar 2015; Roger and Norton 2011). We examine the drivers and consequences of evasive and deceptive tactics in a consumption setting for which communicational missteps may have economic consequences: a waitperson-customer interaction. While an evasive communicator might expect favorable response from the recipient while dodging from potentially self-threatening information, the recipient may not welcome the seemingly fragmented information. This deviation in audience reaction from presenter's expectations deserves special attention, especially in interactions that involve economic consequences.

We draw on the approach of examining 'the presenter's paradox' (Weaver, Garcia, and Schwarz 2012) to argue that the expected outcome of the information communication might not match the actual extent of favorable response from the audience to the information sharing. While the presenters' paradox has been demonstrated using decisions to include or exclude marginally favorable information about the self, previous research has not considered whether the presenter's paradox extends to protective self-presentation of managing the presentation of unfavorable information (Wooten and Reed 2004; Arkin 1981). Our research addresses this void by examining situations in which withholding or distorting unfavorable information can backfire by yielding *less* rather than *more* favorable responses from the intended audience. We further attempt to identify a remedy for this paradox.

SERVER'S PERSPECTIVE

When customers experience an inconvenience at a service establishment, a normative behavior from the server is to correctly communicate the cause of the inconvenience. However, to avoid looking bad in front of the eyes of the customer, the self-presenters might dodge away from the normatively appropriate communication. Admission of one's own mistake can result in negative perception about competence (Fiske et al. 2002), while blaming the kitchen might withdraw the customers as it might threaten assumptions about justice and personal invulnerability (Tenner and Affleck 1990). In this seemingly dilemmatic situation, how would an individual choose to disclose the information?

Pilot A

Participants were experienced servers (N = 165) recruited online and were asked to think of customer inconvenience caused by own or kitchen's mistake they had to deal with as a server. They were asked to reconstruct the verbal communication with the customer about the inconvenience, to the best of their memory. The responses were categorized into truth, evasion, or deception by two independent coders blind to hypothesis.

Being honest about one's own fault appeared most common, but being evasive was nearly as common ($\chi^2(1) = 0.22$, $p = .64$). However, the participants were much less likely to reveal that kitchen had caused the customer inconvenience than to admit their own mistakes, ($\chi^2(1) = 17.80$, $p = .00003$). In fact, evasive responses were most widely used in such cases ($\chi^2(1) = 47.22$, $p < .00001$).

STUDY 1A

Participants (N=153) read one of two versions of a hypothetical scenario, where they, as servers, were to handle information about a customer inconvenience either caused by themselves or by the inattention of the kitchen. At the end, the customer demanded an explanation from the server.

Participants were asked to indicate which of the following best describes how they would respond: (1) *I would apologize and blame myself for the mistake*, (2) *I would apologize and blame the kitchen for the mistake,* (3) *I would apologize but not be specific about who made the mistake*, or (4) *I would apologize but give an irrelevant excuse like "it's been a bad day"*. Responses (1) or (2), indicating willingness to provide either truthful or deceptive explanation, were recoded according to the assigned conditions. Responses (3) and (4) represented the evasive explanation for both conditions. The source factor had a significant influence on the distribution of the responses (Omnibus $\chi^2(2) = 15.96$; $p = 0.0003$), replicating the pilot results: for server's mistake, admitting one's own fault was as frequent an option as being inexplicit about the source of the mistake ($\chi^2(1) = 1.18$; $p = 0.277$). On the contrary, when the mistake was caused by the kitchen, their intentions to pinpoint the correct source significantly reduced ($\chi^2(1) = 16.38$; $p = 0.001$), and evasiveness appeared as most common response ($\chi^2(1) = 16.46$; $p = 0.00005$) to handle information to protect the other party.

STUDY 1B

Online participants (N = 471) were asked to read a scenario involving a lengthy delay at a restaurant, where two factors were manipulated: the source of delay (server's vs. kitchen's mistake), financial incentive structure (tip amount: fixed or not) (see appendix). The second factor was added to examine the moderating role of considering further downstream consequences (e.g., financial outcome).

Overall, the source of delay had a significant main effect on the distribution of the most likely response to explain the reason for the delay (Omnibus $\chi^2(2) = 39.86$; $p < 0.00001$). Participants were mostly truthful when the delay was caused due to their own fault (truth vs. non-truthful tactics, $\chi^2(1) = 21.14$; $p < 0.00001$). However, they were much less likely to be straightforward in the other-fault condition ($\chi^2(1) = 61.79$; $p < 0.00001$). Among the non-truthful responses, evasive responses were used significantly more than deceptive responses (full sample $\chi^2(1) = 194.82$; $p < 0.00001$). This preference towards evasion, nonetheless, was more prevalent when participants were dealing with other party's mistake (within other-fault condition: truth 31% vs. evasion 62%, $\chi^2(1) = 41.66$; $p < 0.00001$).

Financial incentive structure effect. The financial incentive structure had a significant impact on the rate of truth-telling among participants, such that participants in the high incentive condition (HIC) were less likely to provide truthful explanation for the delay than the participants in the low incentive condition (LIC) (40% vs. 51%, $\chi^2(1) = 4.73$; $p = 0.03$; see table 4a), and this effect was more prevalent in the self-fault condition. Albeit the truth-telling was the most prevalent response among participants who were responsible for the delay, they became much less willing to admit their responsibility when their communication partners were perceived to have

greater power to affect their financial compensation (52% vs. 68%, $\chi^2(1) = 5.48$; $p = 0.019$; see table 4b).

The studies altogether showed that while participants were generally honest about their own responsibility in a social mishap, they seemed to be uneasy going public with the information about other people's mistake. However, this greater tendency to disclose one's own mistake (vs. a third party's mistake) in an unfavorable situation is mitigated once the financial stakes are more closely involved. Extending this finding, pilot B and study 2 examined the extent to which such a consideration of downstream consequences is relevant, by directly testing customer reactions to the self-presentational efforts of the service providers.

CUSTOMER'S PERSPECTIVE

Pilot B

North American participants (N = 227) were recruited via an online panel, to ensure the participants were accustomed to leaving gratuity to service providers at the end of a service encounter. Participants were asked to write about communication about an unsatisfactory experience at a restaurant (e.g., long delay for the order, overcooked food, etc.). Then, they were asked to answer a series of questions to identify the perceived type of the communication , and to indicate if the communication resulted in reconsideration of their willingness to leave the tip or the amount of it.

When participants identified the category of communication they received about an inconvenient experience, about 70% of the participants reported that the communication lacked an explanation for the inconvenience.

Moreover, customers reported they had reconsidered their intentions to provide tip when they receive an indefinite responding than definite answers (68% vs. 52%, $\chi^2(1) = 4.57$, $p = .032$).

STUDY 2

Study 2 had three aims: (1) exploring audience responses to different information sharing tactics in determining tip amounts, (2) investigating the role of perceived informativeness and believability of the tactics to observe the differences in willingness to search for additional information, and (3) testing the degree to which, if at all, the audience considers underlying motives of non-truthful behavior to serve self vs. other. Student participants (N = 227) completed 2 phases in this study. In phase 1, they read a scenario representing a perspective of a customer who experienced a lengthy delay at a restaurant, at the end of which they received one of three responses to the direct inquiry regarding the delay: the server blames oneself, blames the kitchen, or does not explain who caused the delay. Then, the participants were asked to complete a set of dependent measure to indicate tip amount, perceived believability and informativeness of the response, and their willingness to seek for further information. In phase 2, participants were presented with another short scenario where the restaurant manager happened to communicate information about the (true) source of the earlier delay. This information would either confirm or reject the original information provided by the waitperson, and let customers to assess the motives of the previous (non-)answer by the waitperson. A final question was asked to assess the extent to which they would change the amount from what they had stated initially.

For responses collected in phase 1, a one-way ANOVA revealed a significant main effect on the dependent variable of tip amount, depending on the response provided by the waitperson (Omnibus F (2, 226) = 4.51, $p = 0.012$). Specifically, customers were willing to leave higher tip when the waitperson reported the delay was caused by kitchen (M = 13.64) than themselves (M = 12.18; $p = 0.066$), and also than when no explanation was provided (M = 11.28; $p = 0.003$).

Customers rated the responses that specifically told who the source of delay was to be much higher in both dimensions of informativeness and believability than null explanation, although saying that it was the waitperson's fault was evaluated significantly more informative and believable than blaming the kitchen ($ps < 0.01$).

Accordingly, customers who received evasive response said they would seek for more information (M = 6.41) than those who received definitive information ($M_{kitchen}$ = 4.51, $M_{waitperson}$ = 3.32; ps < 0.001), and participants seemed to want to verify the information more when the blame was directed to the kitchen (4.51 vs. 3.32; p = .005).

This might be due to some responses are perceived as a violation of communication norms of informativeness and truthfulness (Grice, 1989). Consequently, customers were more likely to (i) search for additional information, and (ii) reduce tip amount to express their dissatisfaction about the 'conversation outcome.'

Phase 2 results revealed that customers would reduce the tip amount by 5.29% when a self-interested lie was revealed. Similarly, when the waitperson's non-answer was proved to be self-serving, the tip amount was reduced by 3.65%. On the contrary, when customers learned that the waitperson was either lying or being evasive to cover up for the kitchen's fault, they increased the tip amount (by 3.89% or 3.28%, respectively). These results suggest that customers were willing to reward other-benefitting intentions of the servers but punish if those non-truthful maneuvers reflected pursuit of self-interest (deception: 3.89 vs. -5.29, $p < .001$; evasion: 3.28 vs. -3.65, $p < .001$).

This provides insights that non-truthful communication may be evaluated depending on the underlying motive behind the chosen tactic. The audience rewarded the presenter precisely when the non-truthful behavior was conducted in the interest of others. This might suggest that there could be a hierarchy in dimensions of morality (which rewards unselfishness over truthfulness), at least in this context.

GENERAL DISCUSSION

Studies conducted to understand the server's perspective, whether recalled or imagined, showed that while servers tend to be more truthful about admitting their own fault, a sizable portion of the responses were provided in an evasive manner. Also, this evasive approach was especially common when the servers were to communicate the fault of the kitchen, perhaps in hopes to protect the kitchen from negative evaluations. Overall, we observed a consistent pattern that evasion deemed itself as a viable option, if not most preferred. Despite the potential benefits that evasive communication might entail, however, evasion may not necessarily lead to successful attainment of one's socio-economic goal within a social interaction. Using tip amounts as representations of customer reactions, we showed that customers respond least favorably to the most frequently chosen tactic, and leaving the least amount of tip on average, and seeking for additional information. Moreover, when the additionally acquired information revealed the fact that the information provided by the server deviated from truth, customers punished the self-interested behaviors but rewarded the those behaviors committed in the interest of the third party.

Taking these findings from all the studies together, a presenter's paradox is observed on a surface level. That is, the most favored option chosen by the presenters does not necessarily lead to the audience reaction that would maximize financial return. Nonetheless, a fairly high level of reported intentions of engaging in further information search reported by customers suggests ways in which the

paradox could at least partially be resolved. Given that there is a chance that the actual information becomes available to the customers in the real world situation, avoiding to disclose the kitchen's fault is not a terribly mistaken approach, as customers tend to compensate for the other-benefitting efforts. Therefore, the presenter's paradox is not as detrimental as it seems, when coupled with the potential of actual information being provided to the audience.

More future studies should investigate the impact of non-truthful communication on information recipients, particularly when the response to the communication involves financial transaction. Assuming that the general disliking of evasive communication by recipients holds, a consumer might be paying more for wrong information over uncertain information. Negative consequences associated with favoring definitive answers may be worthwhile to be addressed in the future research.

Overall, current findings suggest a boundary condition to generally preferable outcomes of employing evasion over deception. That is, while evasion is distinctively preferred way of managing an inconvenient truth, how it is regarded in the eye of the beholder may not be so preferable. Findings from this research will provide practical suggestions to service providers as to how to share self-relevant information without compromising ethical grounds as well as the economic returns that are involved in the social interaction. Careful consideration of (unexpected or undesired) downstream consequences would be helpful in making a wiser when managing the flow of information within sensitive social interactions.

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"Tipping Required": Customer Response to Non-Voluntary Tipping Systems

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EXTENDED ABSTRACT

Customers in North America spend an estimated $42 billion a year on tips (Azar 2009). Customers primarily tip to reward/punish service employees (e.g., Kwortnik, Lynn, and Ross 2009) or to follow social norms (e.g., Lynn, Zinkhan, and Harris 1993). In return, tipping increases service employee motivation, leads to a higher employee retention rate (Lynn, Kwortnik, and Sturman 2011), and increases the customer service quality through heightened employee motivation (Kwortnik, Lynn, and Ross 2009). Tipping is also a way for customers to communicate their dissatisfaction when they prefer to not lodge direct complaints (Karabas, Joireman, Kim 2019; Voorhees, Brady, and Horowitz 2006). In fact, Voorhees, Brady, and Horowitz (2006) found that some noncomplainers utilize tipping to retaliate after a dissatisfactory service experience.

Despite the many important functions of voluntary tipping, recent developments in the retailing industry show that some service establishments are switching to non-voluntary tipping systems such as increasing prices to account for service charges or automatically adding tips to the bill (Kwortnik, Lynn, and Ross 2009; Lynn and Wang 2013; Moskin 2016; Wee 2016). Indeed, a recent survey reported that 18% of restaurants in the U.S. have already adopted the non-voluntary tipping model while an additional 29% are expected to follow this trend (see Lynn and Brewster 2018; Wee 2016). Managers indicate that this change is designed to provide equal pay among employees with different duties. While admirable, evidence suggests that customer responses toward non-voluntary tipping may be less than favorable (Lynn and Brewster 2018; Sell 2016).

A review of the literature shows that scholars have recently begun to pay attention to the implications of non-voluntary tipping systems. For example, previous work has found that customers are less likely to patronize an establishment with non-voluntary tipping because they perceive non-voluntary tipping policies as less fair and more expensive than voluntary tipping (Lynn and Wang 2013). In addition, non-voluntary tipping leads to lower customer satisfaction (Lynn and Kwortnik 2015) and perceived service quality compared to voluntary tipping (Kwortnik, Lynn, and Ross 2009). Finally, research has found that non-voluntary tipping decreases the actual service quality because voluntary tipping motivates service employees to provide higher quality service (Kwortnik, Lynn, and Ross 2009). While these studies provide initial insight into the impact of non-voluntary tipping systems on customers (and employees), there are still a number of important questions remaining.

To address these questions, the present research explores customer reactions to the traditional voluntary tipping system when compared to two different non-voluntary tipping systems, namely *built-in gratuity* (a set percentage of tip is built into menu prices) and *automatic gratuity* (a set percentage of tip is automatically applied at the time of payment). Across three studies (one exploratory survey and two experiments), the current work aims to test the effect of tipping systems on customer anger and return intentions, and the moderating effect of service quality.

THEORETICAL FRAMEWORK

The marketing literature provides initial evidence for the ways that customers react when they find out that they can no longer tip at establishments where they are accustomed to tipping (e.g., restaurants, hair salons, hotels). One example of an industry that has switched from a voluntary to non-voluntary tipping system is the cruise ship industry. Comparison of data before and after the change in the tipping systems indicates that customers rated their experience more positively when voluntary tipping was in use (Lynn and Kwortnik 2015). Moreover, in a survey by Wildes, Mann, and DeMicco (1998), 95% of customers said they prefer voluntary tipping over service charges. Changing the tipping system from voluntary to non-voluntary also affects customer's patronage likelihood. Customers indicated that they would be less likely to patronize a restaurant when the restaurant has built-in gratuity tipping (15% tipping is built into menu prices) or automatic gratuity tipping (15% automatic gratuity) compared to voluntary tipping (Lynn and Wang 2013). Relative to restaurants with voluntary tipping, customers perceive restaurants with built-in gratuity strategy as more expensive, the tipping system as less fair, and expect lower quality service (Lynn and Wang 2013). Also, relative to restaurants with voluntary tipping, customers perceive the automatic gratuity system as less fair (Lynn and Wang 2013). Overall, the literature suggests that, compared to other tipping systems, consumers prefer the voluntary tipping system and are more satisfied with the service when tipping is voluntary as opposed to mandatory. That said, the unfavorable customer attitude toward non-voluntary tipping may lead to more negative outcomes than what has been studied so far. The present work contends that relative to voluntary tipping, customer perception that non-voluntary tipping systems are more expensive and less fair (Lynn and Wang 2013), and subject to lower quality service (Kwortnik, Lynn, and Ross 2009) may lead to angry customers. Anger is a strong emotion that has been continuously linked to costly consequences for firms such as desire for revenge, negative word of mouth, exit, or switch. Thus, current work forwards customer anger as a mediating variable explaining the negative response to non-voluntary tipping.

> *Hypothesis 1:* Tipping systems will have a main effect on customer anger (H_{1a}) and return intentions (H_{1b}), such that non-voluntary tipping will lead to higher customer anger and lower return intentions than voluntary tipping.

> *Hypothesis 2:* Customer anger will mediate the effect of tipping systems on return intentions.

Second, we forward service quality as a moderator to the effects of non-voluntary tipping systems. While current literature shed light on potential changes to service quality as a function of different tipping systems, customers' responses to non-voluntary tipping systems across different levels of service quality (i.e., low, high) has not been studied. This is critical because customers may not be concerned with the non-voluntary tipping under conditions in which service quality is high but might react more negatively to non-voluntary tipping when service quality is low.

> *Hypothesis 3:* Service quality will moderate the effect of tipping systems on the downstream variables (i.e., customer anger, return intentions), such that when the service quality is low, the negative effect of the non-voluntary tipping on the downstream variables will be magnified.

METHODOLOGY

STUDY 1

Existing reports on customer reaction to non-voluntary tipping systems are somewhat dated (Cole 1989; Mills and Riehle 1987; Paul 2001; Snapshots 2002; Wildes, Mann, and DeMicco 1998). Using a 3 (voluntary, built-in, automatic tipping system) cell between-participants design, study 1 aimed to shed light on up-to-date customer response to non-voluntary tipping systems since it is possible that customers have become accustomed to these systems. Participants, who were recruited from Amazon's MTurk, read about one of the three tipping systems: *voluntary tipping* (voluntary payments to service employees for their work), *built-in gratuity* (when prices on the menu have been increased to account for the service charges), or *automatic gratuity* (when a certain percentage is added on top of the bill, regardless of table size) and answered a set of questions.

We found that most participants experienced voluntary tipping, and more participants experienced automatic gratuity than built-in gratuity. One-way chi-square analysis showed that most participants prefer to dine at a restaurant with voluntary tipping over built-in gratuity or automatic gratuity. Next, supporting H1b, a one-way ANOVA revealed a significant effect of the three tipping systems on willingness to patronize. Tukey tests showed that willingness to patronize was higher if the establishment used voluntary tipping than either built-in gratuity or automatic gratuity, while built-in gratuity generated significantly higher willingness to patronize than automatic gratuity (see Table 1). These results provide clear evidence that non-voluntary tipping systems are common and that customers are more in favor of voluntary tipping than non-voluntary tipping systems.

STUDY 2A – RESTAURANT

Participants and Design. Participants from Amazon's MTurk read one of the six scenarios in a 3 (tipping system: voluntary vs. built-in gratuity vs. automatic gratuity) x 2 (service quality: low vs. high) between-participants design. Participants first read one of the two pretested scenarios with the service quality manipulation, and then imagined proceeding to payment. In the *high quality service*, participants just imagined that they enjoyed their soup. In the *low quality service*, participants imagined experiencing double deviation (encountered an initial service failure which was subsequently followed by a failed recovery; Bitner, Booms, and Tetreault 1990). Next, participants read one of the three scenarios with the tipping system manipulation (voluntary tipping vs. built-in gratuity vs. automatic gratuity), imagined making their payment, and completed the dependent measures.

Measures. Participants completed measures of customer anger (five items, α = .95; e.g., "In the scenario I just read, I would feel *outraged*," 1=strongly disagree, 7=strongly agree; adapted from Bougie, Pieters, and Zeelenberg 2003) and return intentions ("How likely is it that you would return to this establishment again in the future?" 1=not at all likely, 7=very likely) adapted from Boulding et al. 1993).

Results

We first ran 3 (tipping systems: voluntary vs. built-in vs. automatic) x 2 (service quality: low vs. high) ANOVAs on customer anger and return intentions. Supporting H1, results yielded a significant main effect of tipping systems on customer anger and return intentions. Tukey tests revealed that voluntary tipping system led to lower anger and higher return intentions than the built-in and automatic gratuity systems. Most importantly, results revealed a significant interaction on customer anger and return intentions. In contrast with H3, results suggested that non-voluntary tipping led to more negative responses under low service quality than high service quality, however, the difference between non-voluntary and voluntary tipping systems was larger under high service quality than low quality service (see Figure 1).

Next, Hayes' (2018) PROCESS Model 4 showed that the indirect effect of tipping systems on return intentions was significant through customer anger. Supporting H2, non-voluntary tipping increased customer anger, which led to lower return intentions (see Table 1).

Further, Hayes' (2018) PROCESS Model 8 showed that the indirect effect of the interaction between tipping systems and service quality on return intentions through customer anger was significant as the confidence interval did not include zero. In contrast with H3, the indirect effect of the tipping systems on return intentions was stronger in the high service quality condition than in the low service quality condition.

STUDY 2B – HAIR SALON

Participants, Design, and Measures. Study 2b aimed to replicate study 2a using a hair salon scenario with participants from Amazon's MTurk. As in the study 2a, participants first read one of the two pretested service quality scenarios, in which they imagined receiving low or high quality service. In *high quality service condition*, participants imagined that their haircut looked the way they wanted. In the *low quality service condition*, participants imagined experiencing double deviation (Bitner, Booms, and Tetreault 1990). Then, participants imagined proceeding to the cashier. They read one of the three scenarios of the tipping systems (voluntary vs. built-in vs. automatic), imagined making their payment, and leaving the establishment. Participants then completed the same measures as in study 2a (i.e., anger, α = .97; return intentions).

Results

We first ran a 3 (tipping systems: voluntary vs. built-in vs. automatic) x 2 (service quality: low vs. high) interaction on customer anger and return intentions. Results yielded a significant main effect of tipping systems on customer anger and return intentions. Supporting H1, Tukey tests showed that voluntary tipping system led to lower customer anger and more return intentions than the built-in and automatic gratuity systems. Importantly, results revealed a significant interaction on customer anger and return intentions (see Table 1). The results replicated study 2a that non-voluntary tipping led to more customer anger and lower return intentions under low service quality than high service quality, however, the effect of tipping system was stronger under high service quality than low service quality (see Figure 1).

Next, consistent with H2, Hayes' (2018) PROCESS Model 4 showed that the indirect effect of tipping systems on return intentions was significant through customer anger. Replicating study 2a, non-voluntary tipping increased customer anger, which led to lower return intentions. Then, Hayes' (2018) PROCESS Model 8 showed that the interaction between tipping system and service quality on return intentions through customer anger was significant as the confidence interval did not include zero. In contrast with H3 and consistent with study 2a, the indirect effect of the tipping systems on return intentions was stronger in the high service quality condition than the low service quality condition.

GENERAL DISCUSSION

Non-voluntary tipping systems represent critical changes to customers' service experience. Thus, in the current work, we examined customer responses to non-voluntary tipping providing important contributions to both theory and practice. First, results showed

that non-voluntary tipping led to higher customer anger than voluntary tipping, which led to lower return intentions. Existing research sheds light on the negative effect of non-voluntary tipping systems on negative outcomes such as lower likelihood of patronage (Lynn and Wang 2013). To our knowledge, there is no research that focuses on customer anger as a mediator of the effect of tipping system on customer behavioral intentions. Customer anger is a critical emotion in services marketing due to its strong connection with other negative emotions (e.g., dissatisfaction) and behavioral intentions (e.g., negative word of mouth, switching).

Second, we found that the effect of non-voluntary tipping system on customer anger and return intentions was stronger under high service quality than low service quality.

Existing research on non-voluntary tipping systems suggests that perceived and actual service quality decreases after the adoption of a non-voluntary tipping system (Kwortnik, Lynn, and Ross 2009; Lynn and Brewster 2018). That said, no prior work has examined response to non-voluntary tipping systems under different levels of service quality. Overall, we did find that the effect of non-voluntary tipping was more negative under low than high service quality. However, counter to our expectations, the difference in customer response to voluntary and non-voluntary tipping was much smaller under low service quality than high service quality.

Managerially, there is a clear need for establishing methods that can reduce customer anger. Given tipping is a way for customers to reward or punish the quality of service, non-voluntary tipping systems does not allow for such evaluation through tipping. Thus, future research can test whether allowing customers to evaluate the service employee would reduce customers' level of anger under a non-voluntary tipping system. In addition, managers should also be aware that customer response to non-voluntary tipping differs as a function of service quality. Managers may assume that customers would not be concerned with non-voluntary tipping if the service quality is high. Contrary to what most managers may predict, the use of non-voluntary tipping has a more detrimental impact on customer response than voluntary tipping under high service quality than low service quality. Future research is granted to explore the reason why the effect of non-voluntary tipping is stronger under high quality service than low quality service.

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The Effect of Commitment Timing on Reciprocity

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EXTENDED ABSTRACT

We report experimental results from several countries showing that, upon being offered a benefit, people reciprocate less when they decide on their level of reciprocation before (vs. after) actually receiving the benefit. We demonstrate the effect under minimal uncertainty regarding the value and delivery of the benefit, and minimal time gap between the reciprocation decision and the receipt of the benefit.

We propose that, upon being offered a benefit, people reciprocate less when they decide on their level of reciprocation before (vs. after) actually receiving the benefit. Making a novel use of Morewedge and Giblin (2015)'s theory of attribute sampling bias, we first reason that value-relevant information about the offered benefit is less accessible before (vs. after) the benefit is received, which results in the recipient having a less positive perception of the benefit's value. This in turn causes the recipient to feel less obligated towards the initiating party, and hence to decide on a lower level of reciprocation before (vs. after) the benefit is received.

We test our hypothesis and the posited mechanism with a series of experiments. We discuss these next.

Study-1: Restaurant Field Experiment

Study-1 was a field experiment conducted at a restaurant where participants could pay any amount they wished for non-alcoholic beverages. Through our setup, we examine how customers, even those who are highly familiar with the drinks, could be affected when they are asked to commit to the payment amount before (vs. after) receiving the beverage. Our results show that, in the 161 observations, after controlling for the actual value ordered, the Pay What You Want (PWYW) payment for familiar beverages at a table decreased by about 21 Rupees when customers indicated their payment amount before (vs. after) receiving the beverages. This effect was significant at 99% confidence level consistently across various regression model specifications. In other words, our results provide initial evidence of our main hypothesized decision timing effect – here in the form of PWYW payment in return for non-alcoholic beverages that were expected to be highly familiar to customers.

Study-2: Voucher Experiment

Study-2 was a laboratory experiment where participants were able to pay any amount they wished for a £5 Amazon gift-voucher. The study improved on rigor by using a benefit with no immediate consumption experience and little to no endowment effect. Our results show that the PWYW payment for the voucher was significantly lower in the "Before" condition (M=£0.32, SD=£0.67, 95% CI: [£0.10, £0.55]; N=37) than in the "After" (condition (M=£0.81, SD=£1.23, 95% CI: [£0.39, £1.22]; N=36) with $t(71)=-2.09$, $p=0.040$ from a between-subjects t-test. Hence, as in Study 1, our data provide support for our hypothesis.

Study-3A: Framing Manipulations

Study-3A was conducted to understand these consistent effects and to test our posited mechanism. The study was an online trust-game (Berg et al. 1995) experiment with manipulations of send/keep framing of the decision on the level of reciprocation. Consistent with the theory of attribute sampling bias (Morewedge and Giblin

2015), a keep framing can serve the function of a cognitive frame that strengthens a sense of ownership of the benefit, even before it is received. This can mitigate the lack of accessibility of value-relevant information about the offered benefit, leading to a higher level of reciprocation than otherwise.

The results from this experiment provides supporting evidence to our posited mechanism. As predicted, the keep framing successfully mitigated the effect of precommitment on reciprocal behavior with $t(121)=1.25$, $p=0.213$, while the send framing reproduced a similar effect as in the previous experiments with $t(93)=2.28$, $p=0.025$.

Study-3B: Process Evidence

The aim of Study-3B was to offer more detailed evidence for our proposed biased information processing mechanism for the commitment timing effect. To do so, we measured proxy variables for the main constructs of accessibility (using decision-duration) and obligation (using self-reported felt-obligation) in the process. In addition, to rule out alternative explanations related to residual uncertainty in the procedure, we measured participant's self-reported level of confidence in his/her decision. The online experimental setup we employed included simply the two conditions ("Before" vs. "After") under the Send framing in Study-3A.

Table 1 summarizes our main findings. As expected, we see a significant decrease in reciprocal payment under the "Before" manipulation compared with the "After" manipulation ($t(131)=-1.98$, $p=0.049$ according to a between-subjects t-test). In addition, the results also reveal that the mean decision duration increased drastically from 17.59s in the "Before" condition to 37.15s in the "After" condition. A between-subjects t-test on the log-transformed variable yields a statistically significant effect ($t(131)=5.67$, $p<0.01$). The results are consistent with our prediction that value-relevant information about the offered benefit in this study was less accessible before (vs. after) receiving the benefit. The results also show that the mean self-reported felt obligation score was lower in the "Before" condition than in the "After" condition ($t(131)=-1.89$, $p=0.06$). A more in-depth a serial mediation model represented in Figure 3 using the SAS PROCESS macro (Hayes 2018, Model-6) with 10,000 bootstrapped samples provides further process evidence. Lastly, the mean self-reported level of confidence was, in fact, higher under the "Before" condition than under the "After" condition ($t(131)=2.02$, $p=0.045$). This suggests that perceived uncertainty did not have a major impact on reciprocation decisions in this study.

In sum, our results shed important insights into the psychology of reciprocity: the mere but actual receiving of a benefit makes a difference in the recipient's obligation towards reciprocation, even if there was already minimal uncertainty regarding value and delivery of the benefit before it is received. In addition, we contribute towards recent research on PWYW and behavioral pricing mechanisms. Lastly, our research has major implications for social-exchange-based businesses among non-profits and social enterprises, with regard to the timing over solicitation of pricing decisions from consumer.

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Let Us Give Thanks: How Gratitude and Message Framing Can Reduce Food Waste

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EXTENDED ABSTRACT

Purpose

For many developed and developing nations, food waste is a major social and political issue that has a range of environmental, social and economic implications. This has come about because of high levels of food waste, with estimates suggesting anywhere from thirty (FAO, 2011) to fifty percent (Stuart, 2009) of all food is sent to landfill. This has major economic and social implications. For example, recent estimates have placed the global value of annual food waste at $1 trillion (Goldenberg, 2016). Along with these economic burdens, in countries like the United States, where more than one in ten people are considered 'food insecure' (U. S. Department of Agriculture Economic Research Service, 2016), there can also be widespread social implications. What, then, can be done to reduce food waste? Previous research (La Barbera, Del Giudice, & Sannino, 2014; Graham-Rowe, Jessop, & Sparks, 2014) has suggested education is the key. However, prior research has typically focused on either cognitive appeals or appeals focused on negative emotions such as guilt, disgust and anxiety. However, there is an existing body of literature suggesting positive (vs negative) emotions may have a greater influence on intended outcomes, such as love on prosocial behavior (Cavanaugh, Bettman, & Luce, 2015) and anticipating feelings of pride on self-regulation of vice foods (Patrick, Chun, & MacInnis, 2009).

As such, the current research develops a theoretical model in which an emotional appeal (gratitude) is used to increase consumers' awareness of food waste issues, depending on the associated congruent message framing (gain vs. loss). Drawing from past research on emotion and construal level theory, we predict that gratitude 'for having' versus gratitude 'for not having' should be associated with different construal levels. This is because when consumers construe something they have (vs not have), they think about objects or events differing on psychological distance (proximal vs. distal). Thus, when consumers feel grateful for something they possess, they are more likely to think of items or experiences they currently have.

Design/Methodology

This research consisted of a pilot study and three experiments. The pilot study verified our predictions that gratitude types can lead to different construal levels. Study 1 sought to test Hypothesis 1 by measuring participants' intentions to reduce food waste. Study 2 was a between subjects design, that tested Hypothesis 2 and established the underlying mechanism driving the emotion effects. It replicated the findings of Study 1 using a different dependent (behavioral) measure. Study 3 was conducted to increase confidence in the findings by using a different wording in the manipulation task, thereby ruling out alternative explanations. In addition, it examined a different behavioral measure.

Findings, originality and contribution

Findings from the three studies provide important theoretical implications. First, this research contributes to the literature on gratitude and consumer behavior by differentiating different types of gratitude. In particular, this research extends the work of Lee and Gershoff (2013) which differentiates gratitude 'for having' something positive and gratitude 'for not having' something negative. Second, the findings from this research establish processing fluency as the mediating factor, which underlies the emotion effects. Notably, consumers have higher levels of processing fluency due to a congruent processing style arising from different types of gratitude and message framing. That is, gratitude 'for having' (vs. not having) activates low (vs. high) construal levels, which matches with loss (vs. gain) frames. As previous research typically examines how different, discrete emotions (e.g., guilt, shame, disgust) can differentially influence construal levels (Chowdhry et al., 2015; Han et al., 2014), these findings also contribute to the literature on construal level because we identify how the same emotion (gratitude) can lead to differential construal levels depending on its focus (i.e., having vs. not having). Third, this research contributes to the literature on message framing by identifying the moderating role of emotions on the effectiveness of gain and loss frames. However, the current research extends the importance of message framing in encouraging pro-environmental behaviors such as food waste reduction.

This research focused on framing effects of the promotional aspect of a social marketing campaign. Social marketers in government agencies, not-for-profits and organizations need to pay attention to how they frame food waste behavior and the relatively 'new' message about the need for reduction. Only recently has the impact of food waste entered mainstream media and public awareness. While many individuals are still unaware or unconcerned about food waste (Quested et al., 2013; Quested et al., 2011), messages that enter the public eye must be persuasive enough to motivate behavior change. Because of this, downstream social marketing campaigns (Carins & Rundle-Thiele, 2014) that disseminate information and educate communities about food waste will continue to be incredibly relevant into the future.

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The Impact of Trade-off Type on Extremeness Aversion

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EXTENDED ABSTRACT

Past research has shown ample evidence that consumers are aversive to losses and tend to opt for the compromise (middle) options when choosing from alternatives trading off on two attributes (e.g., Simonson and Tversky 1992; Simonson 1989). For example, consumers are said to prefer paper towels with reasonable absorption ability and strength, and orange juice with balanced taste and nutritional value, over the extreme options (Lehmann and Pan 1994).

A key explanation to this compromise effect is that losses loom larger than gains and consumers are loss averse (Kahneman, Knetsch, and Thaler 1991; Tversky and Kahneman 1991). Specifically, in the case of three options $\{x, y, z\}$ trading off on two attributes A and B, the extreme option x (z) has a loss on attribute A (B) but a gain on attribute B (A), relative to reference point of the middle option y. Given that the loss is perceived to be greater than the gain, the perceived utility of x and z would be smaller than that of the middle option y.

An alternative explanation advanced by Kivetz, Netzer, and Srinivasan (2004), building on the principle of diminishing sensitivity, suggests that the mapping of the perceived utility of attribute values follows a concave function (e.g., Thaler 1985; Tversky and Kahneman 1991). In other words, the initial gains on an attribute provide more utility than additional gains. In the context of trade-off decisions between three options, this means that the utility of an extreme option gained on one attribute does not weigh up against a middle option's moderate, but "initial" gains on two attributes.

While there is evidence for both models, much less attention has been paid to the latter (see Sharpe, Staelin, and Huber 2008 for an exception). One possible reason to this seeming ignorance is that the two models converge and perform similarly in their predictions of the compromise effect. Therefore, it has been empirically difficult to distinguish the two explanations. However, a key factor which may affect how the two models predict consumers' trade-off decisions has been largely overlooked in previous studies. Specifically, studies that have examined the compromise effect have commonly used options with two approach attributes, in which consumers primarily trade off the "gains" on the attributes (e.g., taste and healthiness of a food option; portability and screen size of a computer; amount of winning and chance of winning a lottery). What is important to ask is whether the two models will similarly converge in their predictions of trade-off decisions between avoidance attributes, in which consumers would primarily compare the "losses" on the attributes (e.g., the interest rate and annual fee of a credit card; the premium and excess fee of an insurance product; the costs and side-effects of a medication).

We propose that, for trade-off decisions on avoidance attributes, while the loss aversion model would still predict an extremeness aversion (i.e., compromise) effect, the diminishing sensitivity account would predict an extremeness seeking tendency. This is because, in a trinary set of $\{x, y, z\}$, the loss aversion model predicts that the middle option y would seem more attractive than the extreme options x and z, as y has smaller losses relative to options x and z. In contrast, the diminishing sensitivity account predicts that the extreme options x and z would be more attractive than the middle option y, as the moderate, "initial" losses on two attributes (e.g., the middle option y) are worse than an extreme loss on one single attribute (e.g., the extreme options x and z).

The results of three studies support this prediction and contribute to the existing research on the compromise effect by examining the impact of trade-off type (e.g., trade off on approach attributes or avoidance attributes). The results replicate when participants made hypothetical choices (f. ex. when choosing a holiday destination or an apartment) and when decisions were consequential (f. ex. when choosing which lottery to play). By using different product categories across experiments, we show that while consumers demonstrate a tendency of extremeness aversion in approach-approach trade-off decisions, they tend to be more extremeness seeking in avoidance-avoidance trade-off decisions. Our results also allow us to disentangle the effect of the loss aversion account from the diminishing sensitivity account in predicting consumers' trade-off decisions.

Theoretically, our research helps explain the heterogeneity of effect sizes observed in previous research (e.g., Neumann, Böckenholt, and Sinha 2016) on the compromised effect in different contexts (e.g., trade-off between approach-approach, approach-avoidance, or avoidance-avoidance attributes) and tests the mechanism underlying the effect in each context. Managerially, our research provides implications for consumers to better understand the impact of various decision contexts (e.g., trade-off between different types of attributes) on their trade-off decisions and for businesses to better design product lines and direct consumer choices to products positioned either in the middle or end of a distribution.

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A Systematic Review of Brand Transgression, Service Failure-Recovery, and Product-Harm Crisis: Integration and Future Directions

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EXTENDED ABSTRACT

Research studies on brand transgression (BT), service failure-recovery (SFR), and product-harm crisis (PHC) appear to have a common focus on a conflict or friction that occurs between a consumer/customer and a firm, its brand or its offering. Yet, the three streams developed surprisingly independently and with limited reference to one another. This situation is unfortunate because all three fields study a similar phenomenon by using complementary conceptualizations, theories and methods; we argue this development in silos represents an unnecessary obstacle to the development of a common discipline of negative events in marketing.

In response, this review synthesizes the growing BT, SFR, and PHC literatures by systematically reviewing 236 articles across 21 years using an integrative conceptual framework. We identified four seminal articles that established each field: two for SFR (Tax et al. 1998; Smith et al. 1999), one for BT (Aaker et al. 2004), and one for PHC (Dawar and Pillutla 2000). Then, we used Google Scholar to search the citations of these articles and completed this search by manually looking at the articles of marketing journals over the last 20 years. Our final database consists of 236 articles, of which 196 are based on empirical work. Within these empirical articles, we systematically coded 394 studies that feature about 3.5 million observations/cases from 21 countries.

Our findings suggest that a brand transgression is typically defined in general terms, which could allow the incorporation of a large array of negative events. By contrast, service failures and product-harm crises are negative events that are more specific in scope, such as "below-expected service performance" and "products found to be defective," respectively. Compared to BT, the fields of SFR and PHC tend to emphasize what managers can do with the notions of "service recovery" and "product recall", respectively. Synthesizing the literature, we could say that all service failures and PHC are BT; however, the opposite is not necessarily true. Additionally, service failures and PHC differ from each other according to the typical number of affected consumers (a few vs. many) and the nature of the offering (service vs. product).

Another overarching resulting theme pertains to the importance for each field to expand its boundaries beyond its typical theoretical "comfort zone". Each field tends to be fairly specialized, and hence all three would gain from integrating the theoretical perspective of the others in order to gain a holistic view of negative events in marketing. For instance, SFR has mainly used a meso lens. Its typical unit of analysis refers to a customer facing a service failure and, to a lesser extent, a frontline employee involved in such a situation (Van Vaerenbergh and Orsingher 2016). The ultimate research focus tends to be on external validity and relevance; SFR aims to provide managerial insights to improve the recovery process and customer-firm interactions. In contrast, a majority of BT theories adopt a micro view by examining the psychological processes and reactions of individuals facing symbolic transgressions committed by brands (Rotman, Khamitov, and Connors 2018). BT's unit of analysis is predominantly at the individual consumer level, and this field tends to use variables that capture deep internal processes. This field has drawn heavily from theories on social psychology of interpersonal relationships in general (Berscheid 1994) and consumer-brand relationship in particular (Fournier 1998; Khamitov, Wang, and Thomson 2019). As for PHC, early work featured a micro-to-meso level by experimentally focusing on consumers while providing managerial insights (Dawar and Pillutla 2000 and Klein and Dawar 2004). Much recent PHC work has adopted a macro level, which encompasses firms' behaviors and performance. The unit of analysis of this newer work tends to be at the firm or investor level. Consistent with its macro focus, this last work exhibits high ecological validity by using archival data on real firms (Cleeren et al. 2017). A key takeaway is that all three streams would benefit from expanding their boundaries and integrating levels of theorizing from other areas. All streams should further develop their theoretical background so that the full spectrum is covered (micro, meso, and macro).

Another key insight is the importance of greater methodological variety and sophistication. It appears critical for all three streams to rely increasingly on 1) field studies, 2) advanced methods, and 3) multi-method enquiries. These three elements are particularly important considering the prevalence of hypothetical scenarios in SFR and BT. It should be noted that PHC presents greater variety of methods with more frequent use of archival data and econometric models (Cleeren et al. 2017). Our analysis reveals that when it comes to measuring outcome variables after a negative event, BT, SFR, and PHC should place a stronger premium on 1) theory-based conceptualizations of responses, 2) objective responses, and 3) financial and market-based metrics. These three types of outcome variables are especially meaningful in light of an overreliance on perceptual self-reported responses. Indeed, this review finds that 81.7% of SFR and 93.3% of BT articles use solely perceptual self-reported scales. In contrast, this proportion is 37% for PHC as a whole. However, we see a marked difference between the two substreams of PHC.

We conclude that BT, SFR and PHC complement each other in remarkable ways. We showcase how the mature field of SFR in concert with the younger but prolific BT and PHC fields can enrich one another while jointly advancing a broad and unified discipline of negative events in marketing. Through this process, we provide and explicate seven overarching insights across three major themes (theory, dynamic aspects, and method) to encourage researchers to contribute to the interface between these three important fields. This review proposes that the three streams should "join forces" to form the foundations of a broad and unified discipline studying negative events in marketing. This view is consistent with a recent call for cross-level integration in which Fournier and Alvarez (2013, p. 260) claim that it is time to "integrate and further articulate existing research under the science of negative relationships umbrella, including theory on brand transgressions, service failures, and crises.…"

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How Well Do Consumer-Brand Relationships Drive Customer Brand Loyalty Across Different Cultures and Institutions

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EXTENDED ABSTRACT

Research on consumer-brand relationships has started to empirically examine mechanisms behind the brand relationships - customer brand loyalty link (e.g. impression management, feelings of security; Sen et al. 2015), but still little is known about the cultural and institutional settings that enable these links. In this study, we conduct a meta-analytic investigation of how seven country-level cultural and institutional variables moderate the relationship between consumer-brand relationships (CBR) and customer brand loyalty, thereby aggregating the collective wisdom which is consistent with this year's conference theme. Specifically, we investigate how and why different types of CBRs - namely brand attachment, brand love, self-brand connection, brand identification, and brand trust – drive loyalty better in some cultural and institutional contexts than others.

Background

Over the last four decades, cross-cultural and institutional research has advanced many constructs that capture country-level differences. Various marketing and consumer research meta-analyses have also used some of these constructs to underscore the general idea that context is important. For example, Chang and Taylor (2016) find that the benefits of customer participation on new product development performance are greater in emerging than in developed countries, while Albers et al. (2010) establish that personal selling elasticity estimates are higher from studies conducted in European countries than from those conducted in the United States. We develop a series of hypotheses relating to a subset of these cultural and institutional variables, described below.

Data collection involved two stages. First, we collected studies published between October 1995 and August 2015, which provided 304 brand relationship elasticities from 143 studies based on data from 179,395 respondents. Using this data, we conducted a meta-analysis of the average effects for each type of CBR on brand loyalty. Second, because this data was drawn from samples in 35 countries, we also collected information about the hypothesized moderators corresponding to the year and country of data collection.

We focus on seven cultural and institutional variables: indulgence versus restraint, individualism versus collectivism, masculinity versus femininity, and power distance (Hofstede 2017); economic globalization (KOF Globalization Index; Gygli et al. 2018), voice and accountability (Worldwide Governance Indicators; Kaufmann and Kraay 2017); and level of urbanization (Urban Population data; World Bank 2017). Overall, we hypothesize that these seven variables moderate the results of the meta-analysis. To examine that possibility, we employ a multilevel modelling approach using a two-level hierarchical linear model (HLM) with the maximum likelihood estimation method.

Results

The indulgence versus restraint dimension is a significant moderator, such that the effect of all five different brand relationships on customer brand loyalty is significantly more positive in restrained cultures (β_{trust} = -.35, $p < .001$; β_{love} = -.54, $p < .001$; $\beta_{attachment}$ = -.42, $p < .001$; $\beta_{identification}$ = -.66, $p < .001$; $\beta_{self-brand connection}$ = -.55, $p < .001$). Individualism versus collectivism is also significant, such that the impact of each of the five brand relationships on loyalty is more positive in collectivist cultures (β_{trust} = -.46, $p < .001$; β_{love} = -.51, $p < .001$; $\beta_{attachment}$ = -.47, $p < .001$; $\beta_{identification}$ = -.56, $p < .001$; $\beta_{self-brand connection}$ = -.60, $p < .001$). In terms of masculinity versus femininity, we show that the link between brand trust and loyalty is significantly stronger in feminine societies (β_{trust} = -.38, $p < .001$). We examine the influence of identity-relevant CBRs (self-brand connection, identification) on customer brand loyalty in countries that are high versus low on power distance and find that in cultures higher on power distance dimension, the positive effect of self-brand connection-based and identification-based relationship loyalty is stronger ($\beta_{self-brand connection}$ = .45, $p < .002$; $\beta_{identification}$ = .30, $p < .001$). Further, compared to countries that are high on economic globalization, countries that are comparably less economically globalized exhibit stronger positive influence of brand identification on loyalty ($\beta_{identification}$ = -.17, $p < .009$). Finally, countries that were lower on voice and accountability showed stronger brand identity-loyalty effects ($\beta_{identification}$ = -.41, $p < .001$) as did less urbanized countries ($\beta_{identification}$ = -.25, $p < .004$). However, similar moderating effect of voice and accountability as well as the level of urbanization did not emerge for the self-brand connection-loyalty link ($\beta_{self-brand connection}$ = -.19, $p = .176$ and $\beta_{self-brand connection}$ = -.09, $p = .490$).

Discussion

Our approach of tying meta-analysis to country-level factors is new to the consumer-brand relationship literature. We make several theoretical and practical contributions. Theoretically this work helps to identify what particular brand relationships drive loyalty most effectively (Khamitov, Wang, and Thomson 2019) under particular cultural and institutional settings (Eisingerich and Rubera 2010). Second, we contribute to the work on cross-cultural consumer behavior and cross-cultural research in general (Al Omoush et al. 2012; Hofstede and Bond 1984; Lam et al. 2009) by providing a more nuanced understanding of the differential influence of cultural dimensions in a branding context.

Practically, our findings suggest that it may be critical to approach selection and fostering of brand relationships differently based on the types of cultures and institutional contexts in which brand and market strategists operate. For example, investing in identification-based brand relationship is advisable in high power distance cultures, in societies with low levels of economic globalization, voice, and accountability, as well as countries with low urban population percentage. As a whole, brand loyalty building efforts may be optimized by adopting a refined approach whereby brand and market strategists match brand relationships to the specific cultural and institutional contexts in question. This also potentially speaks to segmentation and targeting efforts, for instance by suggesting that it may be necessary for brand managers to communicate with rural consumers differently than their urban counterparts.

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Imagining is Better than Seeing:
How Perceptual Difficulty Increases Indulgence

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EXTENDED ABSTRACT

Jennifer is flipping through a magazine when she sees an ad for a decadent treat. The treat is pictured with a clear and high-contrast image. Sally sees an ad for the same treat but this ad is blurry and contains a low-contrast image. Who is more likely to consume the decadent treat? A substantial body of research suggests processing fluency increases consumers' product evaluations and consumption intentions (Labroo, Dhar, and Schwarz 2008; Novemsky et al. 2007). According to this view, Jennifer, who is experiencing a lower level of perceptual difficulty than Sally, is more likely to consume the decadent treat. In the current work, we instead suggest perceptual difficulty, rather than fluency, increases consumption of indulgent food products (i.e., vices; Thomas, Desai, and Seenivasan 2011). That is, Sally will be more likely to consume the decadent treat than Jennifer.

How does perceptual difficulty increase indulgent food consumption? Extending the notion that perceptual difficulty serves as a metacognitive cue stimulating deeper cognitive processing (Alter 2013), we propose that perceptual difficulty of marketing stimuli for vices will encourage consumers to focus on deeper imagery processing (i.e., "elaborated imagery"; MacInnis and Price 1987) of the vices, due to the sensory and hedonic nature of vices. An increased focus on elaborated imagery will distract consumers' attention away from discursive processing of the negative cognitive aspects (i.e., unhealthiness) of vices. In turn, consumption intentions for vices will be enhanced through positive sensory and emotional experiences facilitated via imagery (Kavanagh, Andrade, and May 2005). Consistent with this mechanism via elaborated imagery processing, the positive effect of perceptual difficulty on consumption intentions will be mitigated by several factors inhibiting elaborated imagery processing, including product type (e.g., virtues—healthier food with fewer hedonic features), information type (e.g., less imagery-eliciting food descriptions), cognitive load on visual working memory, and dispositional curiosity.

Studies 1A-1B tested our basic prediction that perceptual difficulty will increase consumption of vices (but not virtues). Study 1A examined consumers' actual product choice. Participants were presented with five bags of jelly beans. Jelly beans were described as either a vice (sugar candy) or a virtue (fruit jelly) and packed in either transparent plastic bags (low difficulty condition) or translucent bags (high difficulty condition) depending on the condition. As we theorized, an interaction between perceptual difficulty and product type was significant ($p < .05$): perceptual difficulty (i.e., translucent packaging) led participants to consume more bags of jelly beans in the vice condition ($p < .05$), but not in the virtue condition ($p > .55$).

Study 1B provided a robustness test of the effect in a different setting. Participants examined an ad for either a vice (caramel pudding) or a virtue (pumpkin pudding). Perceptual difficulty was manipulated via clarity of the image and font type in the ad. Again, an interaction between perceptual difficulty and product type was significant ($p < .05$): perceptual difficulty increased consumption intentions for the vice ($p < .05$), but not for the virtue ($p > .15$).

Study 2 tested the underlying process via elaborated imagery (vs. discursive) processing. Participants examined an ad for pancakes, emphasizing either hedonic benefits (vice) or health-related benefits (virtue). Perceptual difficulty was manipulated by clarity of the ad as in study 1B. As theorized, perceptual difficulty increased consumption intentions for the vice ($p < .05$), but not for the virtue ($p > .20$; two-way interaction: $p < .05$). Mediation analysis revealed that participants who examined a difficult-to-perceive (vs. easy-to-perceive) ad had a higher proportion of imagery (vs. discursive) thoughts in the vice condition, but not in the virtue condition. This study also ruled out several alternative explanations.

Studies 3-5 explored theoretically and pragmatically relevant boundary conditions. Study 3 explored the moderating role of information type (imagery-eliciting vs. non-imagery-eliciting). Participants examined a restaurant menu comprised of three vices and three virtues, written in either a difficult-to-read font or an easy-to-read font. The food items were described in terms of either hedonic sensory features (imagery-eliciting information) or calories and ingredients (non-imagery-eliciting information). A three-way interaction between perceptual difficulty, product type, and information type was significant ($p < .05$). When the product information was imagery-eliciting, the two-way interaction between perceptual difficulty and product type was significant ($p < .01$) as in earlier studies. However, the interaction was NS when the product information did not elicit imagery ($p > .80$).

Study 4 explored visual load as a moderator. Participants memorized either a complex visual pattern (high load) or a simple visual pattern (low load) before examining an ad for chocolate cake (vice only). We expected that a high (vs. low) cognitive load on visual working memory would disrupt participants' elaborated imagery processing of the cake. As expected, we found a significant interaction between perceptual difficulty and visual load on consumption intentions ($p = .01$). The positive effect of perceptual difficulty on consumption intentions for the vice remained significant under low load ($p < .05$), but this effect was mitigated under high load ($p > .15$). Mediation via elaborated imagery processing was also supported.

Study 5 examined consumers' dispositional curiosity as another important moderator. We expected that participants with low dispositional curiosity would be chronically less likely to engage in elaborated imagery processing. Participants completed a scale for dispositional curiosity and an unrelated filler task. Next, participants examined an ad for cupcakes (vice only). An interaction between perceptual difficulty and dispositional curiosity on consumption intentions was significant ($p < .05$): For participants with high dispositional curiosity, the positive effect of perceptual difficulty on consumption intentions was significant ($p < .05$), but this effect was NS for participants with low dispositional curiosity ($p > .20$). Again, mediation via elaborated imagery processing was supported.

Together, we demonstrate that perceptual difficulty of marketing stimuli for vices increases consumption intentions for the vices, mediated by elaborated imagery processing. Therefore, the effect of perceptual difficulty on indulgence is attenuated by several boundary conditions which inhibit consumers' elaborated imagery processing. In addition to making unique theoretical contributions to the literature on processing fluency, imagery, and self-control, we provide practical implications for consumers and marketers.

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The Left-Digit Effect Discourages Consumers to Upgrade

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EXTENDED ABSTRACT

Consumers' price perceptions are influenced by the left-digit effect (Manning and Sprott 2009; Thomas and Morwitz 2005): consumers perceive $2.99 as significantly cheaper than $3.00, whereas they perceive $3.00 and $3.01 as virtually the same. Empirical models also lend support to such a left-digit effect (Stiving and Winer 1997). For marketers, the recommendation is straightforward. Using a $2.99 (vs. $3.00) pricing is beneficial because it will lead to greater sales. However, consumers often make choices with vertical upgrade opportunities. For example, the Toyota Corolla starts at $19,500 with multiple vertical upgrades (or trims: L, LE, SE, XLE). Similarly, hotels also often offer upgrading opportunities. In these cases, the firm's goal is to maximize spend. In the current work, we examine the effectiveness of left-digit pricing under such situations where there is an upgrade opportunity.

We propose that there is reason to suspect for the left-digit effect to backfire when there are vertical upgrade opportunities. Left-digit effect is effective because the leftmost digit of price stays below a threshold and thus feel relatively small in magnitude. Furthermore, consumers percieve differences across a threshold as larger than ones that do not cross a threshold (Irmak, Naylor, and Bearden 2011; Mishra and Mishra 2010; Shoham, Moldovan, and Steinhart 2018). Thus, it stands to reason that the difference between a base price that is below a threshold (e.g., $199) and an upgraded price (e.g., $215) will feel larger than a base price above threshold (e.g., $200). Accordingly, we hypothesize a base price below the threshold will make the upgrade feel more expensive and thus decrease upgrade choice. We test these predictions across four studies.

Study 1 was a 2(framing: two brands vs. upgrade) x 2(base price: below-threshold vs. above-threshold). 250 undergraduates imagined planning a short trip with friends and evaluated a lower-priced room and a deluxe room. For half the participants options were framed as two different brands (Hilton Standard Room vs. Hyatt Deluxe Room), while the other half saw the same choices framed as an upgrade within the same hotel (Hilton Standard Room vs. Hilton Deluxe Room). Prices were $199 vs. $214 in the below-threshold condition and $200 vs. $216 in the above-threshold condition. As expected, when framed as two brands the standard room was rated as less expensive if priced below-threshold ($M_{\$199}=3.03$) than above-threshold ($M_{\$200}=3.39$, $p=.055$). Deluxe rooms were not significantly different ($M_{\$214}=3.25$ vs. $M_{\$216}=3.39$, $p=.474$). Importantly, we found the opposite pattern for the upgrade decision: both the standard and the upgraded rooms were perceived *more* expensive in the below-threshold ($M_{\$199}=3.41$; $M_{\$214}=3.52$) than the above-threshold condition ($M_{\$200}=3.06$, $p=.059$; $M_{\$216}=3.08$, $p=.025$). Importantly, a mediation analysis found that these price perceptions drive participants' hotel room choice (95% CI=[.20, 6.56]).

Study 2 was a 2(upgrade price information: present vs. absent) x 2(presentation order) between-subjects design. 295 Mturkers in the northeast USA were asked to choose a hotel at Niagara Falls. Half of the participants (upgrade price absent) were presented with two standard room options at different hotels priced either $98 or $102 (counterbalanced). The other half (upgrade price present) participants saw price upgrade information in addition to the base price. All participants indicated their relative preference between the two options (from 1=Hotel A to 9=Hotel B). As expected, without upgrade information participants were more likely to choose the cheaper hotel (M=5.88 vs. M=7.57, $p<.001$). However, this effect was completely eliminated when participants were presented with full information of upgrade prices (M=6.23 vs. M=6.10, $p=.752$). Put differently, while our results replicate the left-digit effect in a simple choice scenario (i.e., when upgrade price information is missing), the left-digit effect is eliminated when full upgrade price information is available.

Study 3 and 4 use multiple product categories in a choice scenario. In Study 3, we presented two purchasing scenarios to 314 undergraduates where each category offered a vertical upgrade opportunity in a 2(starting price: below-threshold vs. above-threshold, between) x 2(replicates: car, apartment, within) mixed design. For each replicate, participants chose between four options (i.e., one basic and three possible upgrades) and responded to several other measures to rule out alternatives. When the starting price was above-threshold, participants were more likely to upgrade (89.2%) than when the starting price was below-threshold (81.1%, $c^2(1)=8.267$, $p=.004$). As a result, starting price that were above-threshold led to higher sales (Car: $M_{below}=\$4,968$ vs. $M_{above}=\$5,705$, $t(312)=2.294$, $p=.022$; Apartment: $M_{below}=\$138$, $M_{above}=\$154$, $t(312)=2.077$, $p=.039$). We found no differences in quality perception, purchase likelihood, how good of a deal the product is, decision difficulty, and anticipated regret (ps>.08). We find a significant difference in perceived attractiveness of the product ($M_{below}=6.80$, $M_{above}=7.15$, $p=.023$), which did not account for the effect.

Study 4 (N=267 undergraduates) used the same design with a few changes: we added one more replicate (vacations) and held the price of an upgrade (instead of the marginal cost of the upgrade) constant. We found the same pattern of results. When the starting price is set above the threshold, participants were more likely to upgrade (79.4%) than when the starting price was below the threshold (68.2%, $c^2(1)=13.194$, $p<.001$). As a result, setting the starting price above a threshold again produced higher per customer sales that were significant in the apartment and vacation replicates (Apartment: $M_{below}=\$1,117$ vs. $M_{above}=\$1,133$, $t(265)=2.019$, $p=.04$; Vacation: $M_{below}=\$2,140$ vs. $M_{above}=\$2,209$, $t(265)=2.604$, $p=.010$) but not in cars ($t(265)=.216$, $p=.829$, $M_{below}=\$23,080$, $M_{above}=\$23,145$). Consistent with Study 3, there were no difference on quality perceptions, the attractiveness of the product, purchase likelihood, how good of a deal the product is, decision difficulty, or anticipated regret (all ps>.12).

In sum, our results show that when a starting price is above a threshold, consumers are more likely to upgrade compared to when the starting price is below a threshold. The findings suggest that when there is a vertical upgrade, the left-digit effect can actually backfire, decreasing sales, lowering upgrade opportunities opportunity, and eventually lead to overall lower sales.

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It's Not Chance, It's Me! Serendipity Motivates Psychological Ownership and Word-of-Mouth in Narcissistic Consumers

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EXTENDED ABSTRACT

Serendipity refers to a fortunate chance event and is often used by marketers. For example, consumers may perceive serendipity when they come across a special unplanned promotion. Serendipity makes consumers happy (Jiang, Cho, and Adaval 2009). However, they may at the same time be reluctant to tell others about their good fortune, because it was acquired through no skill or effort of their own. The prevalence of serendipity in the marketplace suggests its effects warrant attention.

Consumers high in narcissism believe they are superior to others and actively seek opportunities for self-promotion to maintain their inflated sense of self (Hepper, Gramzow, and Sedikides 2010; Sedikides and Campbell 2017). Distinctive possessions offer such opportunities (Lee, Gregg, and Park 2013), and consumers often use word-of-mouth to communicate their psychological ownership of a product (Kirk, Peck, and Swain 2018). We propose that consumers higher in narcissism are more likely to attribute a serendipitous outcome to themselves than to chance, providing them an illusion of control (Langer 1975). Drawing from psychological ownership theory (Pierce, Kostova, and Dirks 2003), we postulate that, due to this self-attribution, they are more likely than low narcissists to feel ownership for a product made available to them via serendipity, leading to increased word-of-mouth.

Results of four studies support our conceptualization. This research offers a first look at the effects of serendipity on consumer behavior in the marketplace. Contributing to the psychological ownership and word-of-mouth literatures, this research illuminates the motivational role of serendipity in enhancing narcissistic consumers' psychological ownership and resulting word-of-mouth.

Study 1. We examined the notion that consumers high in narcissism are more likely to attribute good luck to themselves by inviting 186 MTurk participants to take a personality assessment survey. Results revealed that narcissism (measured with the 40-item Narcissism Personality Inventory; Raskin and Terry 1988) is significantly and positively correlated with belief in good luck ("I consider myself to be a lucky person;" Darke and Freedman 1997; r = .51, p < .001).

Study 2. When consumers are aware of promotional events, they often plan ahead to participate. According to psychological ownership theory (Kirk et al. 2018), this investment of self enhances their feelings of ownership. In contrast, a serendipitous event involves no prior planning, and elicits less psychological ownership. However, if narcissists attribute serendipity to themselves rather than to chance, this illusion of control (Langer 1975) should attenuate the effect of intentionality on psychological ownership and word-of-mouth.

Study 2 employed a 2 (event: intentional/serendipitous) x narcissism (continuous) design with 155 MTurk participants. First, we assessed narcissism. Two weeks later, participants imagined themselves in a shopping scenario, in which they found a good deal on a set of crystal bar glasses either intentionally or serendipitously (by accident). An open-ended question ("What would you tell your family and friends about this shopping trip?") assessed word-of-mouth.

We coded responses as either low ("There is nothing special to tell") or high ("I found an amazing deal!") word-of-mouth. Results of bootstrapping analysis (Hayes 2018; PROCESS model 1) revealed

a significant interaction between event and narcissism on word-of-mouth (p = .031). Supporting our conceptualization, serendipity was more likely to elicit positive word-of-mouth for consumers high (vs. low) in narcissism

Study 3. To examine the process, study 3 employed a 2 (event: intentional/serendipitous) x narcissism (continuous) design with narcissism measured two weeks in advance. 206 MTurk participants imagined themselves in one of the study 2 scenarios. Two items captured self-attribution (e.g., "I found this great deal on the bar glasses because of my talents/skill"). We measured psychological ownership (Peck and Shu 2009), trip and glasses word-of-mouth, and selfie posting intentions.

Bootstrapping analyses (PROCESS model 83) revealed significant indices of moderated mediation for each word-of-mouth measure. Consistent with an illusion of control account, self-attribution mediated the effect of serendipity on psychological ownership and subsequent word-of-mouth in consumers low but not high in narcissism. In other words, consumers high in narcissism attributed locating an attractive product to their superior self, whether they actually invested themselves in finding it or not.

Study 4. Another way narcissists self-enhance is by associating with successful others (Hepper et al. 2010). Therefore, they may also be more likely to claim others' serendipity for themselves, especially when the target of psychological ownership is attractive. Narcissism is comprised of both admiration, concerned with grandiose self-promotion, and rivalry, concerned with defending the superior self (Back et al. 2013). Word-of-mouth can be used to self-promote as well as to boost social status (Berger 2014). Therefore, both facets of narcissism should motivate word-of-mouth when narcissistic consumers are confronted with the serendipity of another individual.

We examined this notion in study 4 with a 2 (product quality: low/high) x narcissism (continuous) design in the context of "just-missed" serendipity situation, with narcissistic admiration and rivalry measured two weeks in advance. 200 MTurk participants imagined themselves shopping for a sweater. The checkout clerk told them that the customer just before them had won a free pair of (5-star or 1-star rated) headphones. We measured identity-based psychological ownership motivation with three items (e.g., "Telling others about the headphones would help show them that I am special"). We measured psychological ownership and word-of-mouth as in study 3.

Bootstrapping analysis (PROCESS Model 9) revealed significant indices of moderated mediation for both admiration and rivalry. When "just missing" a sales promotion, low narcissists' psychological ownership of the product and subsequent word of mouth was not affected by product quality. However, for high narcissists, their use of others' serendipity to self-enhance depended on the quality of the product.

Discussion. Across four studies, we found that consumers high (vs. low) in narcissism self-enhance by attributing serendipity to their superior self rather than to chance. This self-attribution increases their psychological ownership of a product, resulting in elevated word-of-mouth. Further supporting the motivational role of serendipity for consumers high in narcissism, we found that these

consumers not only use their own serendipity for self-enhancement, but also bask in the reflected glory (Cialdini et al. 1976) of serendipitous others.

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"Saved For Later:"
The Positive and Negative Effects of a Delayed Indulgence

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EXTENDED ABSTRACT

Imagine a consumer is faced with the opportunity to make an indulgent purchase. Knowing that this purchase would be detrimental to their savings goal, the consumer may seek to justify it. Initially, the consumer might chose to practice self-restraint. But what if, after a week, the consumer decides to follow through with the purchase? How will the act of postponing the indulgence influence the consumer's self-perception, ultimate purchase satisfaction, and subsequent self-regulatory behavior?

The current research demonstrates that the mere act of delaying an indulgent purchase can evoke the same level of perceived self-control as not indulging at all —a level that is higher than in instances of immediate indulgence, despite goal failure. Furthermore, we show that, the enhanced perception of self-control evoked by a delay leads to self-consistent restrained behavior in subsequent opportunities to indulge. Paradoxically, our findings also reveal that bolstered perceptions of self-control resulting from a delayed indulgence, ultimately reduce purchase satisfaction.

Prior research demonstrates that exposure to indulgent purchases gives rise to conflicting goal demands. While goal compliance enhances psychological well-being (Brunstein 1993), goal failure decreases it (Jones, Hogan, and Straumand 2009). To avoid the negative consequences of goal transgressions, people often engage in motivated reasoning (Xu and Schwarz 2009), which offers the utility of shielding the individual from psychological harm arising from goal failure. In the current paper, we argue that a delay in indulgence can be deceivingly inferred as a sign of restraint allowing consumers to retain their subjective assessment of self-control, despite the fact that a goal violation has ensued.

We also argue that, despite the positive effect on self-perception, a delayed indulgence negatively influences purchase satisfaction. Prior research demonstrates that when the concept of self-control is salient, consumers construe choice as less reflective of preference (Sela, Berger, and Kim 2017). As such, the exaggerated sense of self-control resulting from postponing an indulgent purchase, deflates purchase desirability, and hence purchase satisfaction —compared to an immediate, impulsive purchase, which is deemed more satisfactory.

Lastly, we propose that, because individuals are motivated to preserve a consistent self concept (Rosenberg 1979), an initial delay to indulge, despite goal failure, will lead them to exhibit self-restrained behavior when a second opportunity to indulge arises. We conducted three experiments to verify our hypotheses.

The objective of study 1 (n=161) was to test our prediction that a delayed indulgence bolsters perceptions of self-control. We employed a one factor (purchase: immediate, delayed, none) between-participants design. CrowdFlower (crowdsourcing platform) participants read a scenario adapted from Soman and Cheema (2004), in which they were presented with their savings goal, followed by an opportunity to make an indulgent purchase that would violate that goal. Participants either read that they made the purchase immediately, returned a week later and made the purchase, or did not make the purchase. We then obtained a measure relating to self-control perceptions (adapted from Puri 1996). Results revealed that a delayed purchase bolstered self-control perceptions relative to an immediate purchase, while no difference was reported between the delayed and no purchase conditions ($M_{immediate}$ = 4.13, $M_{delayed}$ = 4.72, $M_{no\_purchase}$ = 5.09; $F(2,157)$ = 7.21, p =.001), suggesting that delaying an indulgence allows consumers to retain their perception of self-restraint, despite goal violation.

The objectives of study 2 (n = 175) were to test our mediation hypothesis and rule out the alternative explanation that the effect observed in the previous study was driven by the perceived impulsivity of an immediate purchase. A delay-due-to-temptation condition was therefore added, in which participants read that they returned to make the purchase a week later, because they succumbed to temptation. Measures relating to self-control perceptions and purchase satisfaction were then obtained. Consistent with our previous findings, a delay enhanced self-control perceptions relative to an immediate purchase. This contrast was eradicated when the delayed indulgence was framed as resulting from willpower depletion ($M_{immediate}$ = 4.57, $M_{delayed}$ = 5.07, $M_{delayed\_temptation}$ = 4.24, $M_{no\_purchase}$ = 5.19; $F(3,171)$ = 5.36, p =.001). A delay resulting from lack of willpower did not enhance assessment of self-control relative to an immediate purchase. Further, participants in the delayed and no purchase conditions reported lower levels of satisfaction compared to participants in the delayed-due-to-temptation condition ($M_{immediate}$ = 3.95, $M_{delayed\_temptation}$ = 4.07, $M_{delayed}$ = 3.09, $M_{no\_purchase}$ = 3.20; $F(3,171)$ = 3.23, p = .02). Finally, bootstrapping results (Model 4, Hayes 2012) supported an indirect effect (95 % CI = [-.13, -.01]). Findings suggest that although a delayed indulgence is interpreted as a sign of restraint, it ultimately results in reduced purchase satisfaction, and, furthermore, helped rule out the alternative explanation that the effect was driven by the perceived impulsivity of an immediate purchase.

Study 3 aimed to investigate whether merely delaying an indulgence would lead to self-consistent behavior during a subsequent opportunity to indulge. We employed a one factor (purchase: immediate, delayed) between-participants design (n = 123). Participants read the same scenario from study 1. Participants were then informed that they would be evaluating a new potato chips brand, and were provided with a bowl of chips. Amount consumed was calculated for each participant. Results revealed that grams consumed was significantly lower in the delayed versus immediate condition ($M_{delayed}$ = 8.12; $M_{immediate}$ = 11.25; $F(1,121)$ = 4.64, p = .03), demonstrating that merely delaying an indulgence leads to consistent restrained behavior.

The current research contributes to the literature on self-regulatory failure (Baumeister 2002) by identifying another circumstance in which consumers escape the negative outcomes of goal failure. In particular, we show that, merely delaying an indulgence leads to an assessment of self-restraint that is comparable to that evoked from goal compliance, allowing consumers to preserve a positive self-perception. The caveat however, is that because decreased preferences are inferred when choices are made under conditions of self-restraint (Sela et al. 2017), purchase satisfaction is ultimately sacrificed. Furthermore, although the initial self-regulatory goal is ultimately violated, a delay achieves a change in self-perception to one of self-control, subsequently leading to restrained behavior when a second opportunity to indulge arises.

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When Helping Hurts: Receiving Help Toward the End (vs. Beginning) Undermines Psychological Ownership and Consumer Well-Being

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EXTENDED ABSTRACT

In pursuing various activities, consumers often receive help from others, either voluntarily or involuntarily. Then, how does receiving help affect a consumer's happiness or satisfaction regarding their activity and outcome? Despite the ubiquity of help efforts, researchers have begun to recognize the downside of help exchanges (Deelstra et al. 2003; Halabi, Nadler, and Dovidio 2011; Lee 1997; Nadler 2002; 2015). That is, although recipients gain the instrumental benefits of help, it may simultaneously cause psychological harm by inducing feelings of dependency and incompetence (Alvarez and van Leeuwen 2011; Halabi et al. 2011; Nadler 2002), thus negatively impacting subjective well-being (Deelstra et al. 2003; Halabi et al. 2011).

Building on this literature, we explore the impact of receiving help on the subjective well-being of consumers who are in pursuit of activities, and we identify an important variable that modulates the negative effect and psychological process of receiving help. We propose that the impact of help is contingent on its timing, that is, *when* help is provided relative to the course of actions. Specifically, we suggest that receiving help decreases subjective well-being in general, but this negative impact increases as the timing of help approaches the completion of the activity. In other words, help in a later stage of an activity is more likely to undermine subjective well-being than help in an earlier stage.

We theorize that this effect occurs because recipients perceive later help as making a greater contribution than the same help received at an earlier stage. In support, research suggests that the perceived contribution of each step toward goal completion increases over the course of goal pursuit (Brendl and Higgins 1996; Koo and Fishbach 2012). For example, completing the first of ten steps reduces the distance to the completion by 10% (1 out of 10 remaining steps), whereas completing the ninth step reduces the distance by 100% (1 out of 1 remaining step). When help is perceived as making a greater impact on an activity, it is more likely to reduce a recipient's psychological ownership—a feeling that the outcome of the activity is one's own, and no one else's (Pierce, Kostova, and Dirks 2003). Given that a sense of ownership is pivotal not only for the motivation to pursue an activity but also for satisfaction and well-being (Deci and Ryan 1985; 2000), we hypothesize that receiving help in a later (vs. earlier) stage will reduce a recipient's subjective well-being by undermining the recipient's psychological ownership of their pursuit of the activity.

In **Study 1**, 493 participants from Prolific imagined that they were engaging in two activities: solving a cube and assembling Lego blocks, in which they received help at one of four different stages of the activity: beginning, early-middle, late-middle, and end. We also added a control condition in which participants received no help. In both scenarios, participants in no-help condition felt greater subjective well-being than participants in all other conditions. As predicted, a linear regression revealed that subjective well-being decreased as the help was given toward the end of the activity (cube: $b = -.15$, $SE = .07$, $p = .029$; Lego: $b = -.18$, $SE = .07$, $p = .011$).

Study 2 used a 2 (timing of help: earlier stage vs. later stage) between-subjects design. Participants engaged in a real activity and received real help. 134 undergraduates followed a five-step process to assemble toy plastic blocks to create a puppy. A confederate offered a help in either an earlier stage (the 2nd step) or a later stage (the 5th step). As predicted, participants in the later-stage condition reported lower subjective well-being and psychological ownership than those in the earlier-stage condition ($ps < .001$). In addition, psychological ownership significantly mediated the effect of timing of help on subjective well-being (indirect effect = -.31, $SE = .12$, $CI_{95\%}$ = [-.618, -.110]).

In **Study 3**, we assessed the perceived contribution of the helper, and tested whether perceived contribution and psychological ownership serially mediated the effect of help on subjective well-being. 195 participants from Prolific read a scenario in which they received help in either an earlier or a later stage. As predicted, perceived contribution of the helper and psychological ownership serially mediated the effect of help on subjective well-being ($b = -.10$, 95% CI = [-.170, -.038]).

In **Study 4**, we tested our theory by directly manipulating psychological ownership. 406 participants from Prolific imagined that they were assembling either one toy blocks versus ten identical toy blocks, and they received help in either the earlier or later stage of the activity. We predicted that assembling the same toy blocks ten times (vs. once) would decrease psychological ownership of the assembly, further attenuating the effect of help. As predicted, the one-toy condition replicated the negative effect of later (vs. earlier) help ($p < .001$), but the effect disappeared in the ten-toy condition ($p = .969$).

Receiving help should decrease subjective well-being only if one is intrinsically motivated to pursue the activity. If one is instead extrinsically motivated (e.g., doing an activity for payment), then the proposed effect would not hold and might even reverse: people would be feel happier (not less happy) when receiving "greater" help on completing task. In **Study 5** ($N = 367$ from Mturk), we measured participants' motivation (intrinsic versus extrinsic) to play a game and tested whether the type of motivation moderated the proposed effect. As predicted, there was a two-way interaction between timing of help and motivation ($b = -.10$, SE = .03, $p = .003$). Receiving help in the later (vs. earlier) stage resulted in lower subjective well-being for intrinsically-motivated participants, whereas it resulted in greater subjective well-being for extrinsically-motivated participants.

In sum, the current research explores how the timing of the help modulates the detrimental effect of help on the subjective well-being of consumers in pursuit of activities. Our findings advance the understanding of the negative effects of help on consumer well-being and offer practical insight into *when* help should be given to minimize such harmful effects.

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Think Global or Local?: How Consumer Identity Affects Variety Seeking

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EXTENDED ABSTRACT

We propose that a salient global (vs. local) identity is associated with more exposure to ethnic diversity, which leads to a greater sense of mistrust (e.g., Dinesen and Sonderskov 2015) and less variety seeking. We further demonstrate that perceived trustworthiness of a brand moderates the effect. Individuals with a global identity view the world as a "global village," whereas those with a local identity associate with people in their local communities (Arnett 2002; Zhang and Khare 2009).

Humans perceive people from other ethnic backgrounds as more threatening and less trustworthy than their own ethnic group (Fershtman and Gneezy 2001). Second, locals tend to identify with their local community and visualize having more intimate connections based on trust or those that facilitate trust (Gao, Zhang, and Mittal 2017). Third, globals (but not locals) identify with numerous cultures and are more likely to experience identity confusion (Arnett 2002), increasing feelings of mistrust (Rosenthal, Gurney, and Moore 1981).

In the context of product evaluations, globals trust brands and people less. The perception that brands are less trustworthy should motivate globals to seek variety. However, when locals perceive brands as trustworthy, seeking less variety. First, untrustworthy people or brands are unreliable, engendering uncertainty (Colquitt and Rodell 2011), which increases the tendency to seek variety (Simonson 1989). Individuals diversify their investments in the presence (vs. absence) of uncertainty to manage risks (White et al. 2013). Second, trust in a brand is a key determinant of brand loyalty (Lau and Lee 1999). Further, brand loyalty is negatively associated with variety seeking behavior (Kahn 1999). We expect that compared to locals, globals are more likely to lack trust and thus are more likely to seek variety.

Hypothesis 1	When making choices, globals have a greater tendency than locals to choose variety.
Hypothesis 2	The effect of global (vs. local) identity on variety seeking is mediated by one's perceived trust.
Hypothesis 3A	When trust is made salient, the tendency of globals to seek variety will decrease, whereas the tendency of locals to seek variety will not change.
Hypothesis 3B	When trust is made less salient, the tendency of locals to seek variety will be elevated, whereas the tendency of globals to seek variety will not change.
Hypothesis 4	When store reputation is salient (vs. control), the tendency of globals to seek variety will significantly decrease, whereas the tendency of locals to seek variety will not change.

STUDY 1A: FIELD STUDY WITH REAL CHOICE (H1)

110 people (47.5 % female; M_{age} = 25.02, SD = 10.25) participated in a survey on campus. We measured global-local identity using a 3-item scale (Zhang and Khare 2009; α = .88).

We then presented participants with four different sets of pens (counterbalanced). Three offered no variety: three black, three blue, or three red pens. Variety option was one black, one blue, and one red pen. Global identity predicted variety seeking, b (1) = .37, SE = .14, Wald = 6.824, Odds Ratio = 1.45, p = .009.

STUDY 1B: PRIMED GLOBAL-LOCAL IDENTITY WITH REAL CHOICE (H1)

A total of 87 undergraduate students (62.1 % female; M_{age} = 20.17, SD = 1.84) participated. Following Zhang and Khare (2009), global-local identity was primed using a sentence-unscrambling task (α = .92).

Participants picked one of four bags of chocolates from a box on their desk with four clear plastic bags, each containing three pieces of chocolates. Two bags each contained three different brands of chocolates (Kit Kat, Twix, Milky Way) and the other two bags had chocolates of one brand. There was a main effect of identity ($\chi^2(1)$ = 5.21, p = .029). Globals (72.7%) chose variety more than locals (48.8%).

STUDY 2: PERCEIVED TRUST (H2)

199 MTurk workers (37.9 % female; M_{age} = 35.31, SD = 10.53) from the US participated. Global-local identity was measured (α = .94).

Variety was measured (α = .68; Fishbach, Ratner, and Zhang 2011). We measured trust in people, our mediator (Hetherington 1998; α = .87).

Global identity negatively predicted perceived trust (r = - .26, p < .001) but positively predicted variety seeking (r = .37, p < .001). Further, perceived trust was negatively associated with variety seeking (r = - .37, p < .001). Regression analyses also revealed that global-local identity significantly predicted variety seeking (β = .37, SE = .05, t(198) = 5.55, p < .001).

Mediation (Model 4, Hayes, 2013) suggested that the indirect effect of perceived trust on the link between global-local identity and variety seeking (β = .06, SE = .03, CI95 = .02, .13).

STUDY 3: SALIENCE OF TRUST (H3)

400 MTurk workers (62.7 % female; M_{age} = 38.02, SD = 12.24) employing a 2 (identity: global vs. local) × 3 (trust: trust enhanced, trust reduced, trust unchanged) design. Global-local identity was primed, and the manipulation was assessed using the 3-item scale (α = .95; Study 1B).

In the trust [mistrust] condition, participants read an article that explained why marketers are trustworthy [untrustworthy]. In the control, they read about different marketing strategies. Following Simonson (1990), participants imagined choosing candy bars for the next 15 days from 20.

A 2 (identity) × 3 (trust: unchanged, lowered, enhanced) ANOVA on variety seeking revealed a interaction between identity and trust (F(1, 394) = 3.80, p = .023). Contrasts were in line with H3A and H3B.

STUDY 4: STORE REPUTATION (H4)

185 MTurk workers (53% female; M_{age} = 35.68, SD = 11.45) from the US participated in a study with a 2 (identity: local vs. global) × 2 (reputation: high vs. neutral) design.

Global-local identity was primed (α = .96). In the trust condition, Eati's a new market, passed the health inspection with an "A" grade. In control, there were no results. Participants imagined buying chips at Eati's for the next four weeks from four flavors (Classic, Barbecue, Sour Cream & Onion, Cheddar; Simonson 1990).

A two-way interaction between identity priming and trust manipulation emerged ($F(1, 181)$ = 4.09, p = .045). Main effect replicated in control and contrasts in H4.

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The Greater the Hierarchy, the Less Prone to Coupons

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EXTENDED ABSTRACT

Power distance belief (PDB) indicates the extent to which individuals accept and endorse inequality and hierarchy (Hofstede 2001). In the present research, we examine coupon proneness as a novel consequence of PDB. Coupon proneness refers to the propensity to use coupons or to positively respond to a purchase offer because of a coupon (Lichtenstein, Netemeyer, and Burton 1990). We propose that quality sensitivity is a key mechanism underlying the effect of PDB on coupon proneness.

People high (vs. low) in PDB are more likely to be quality sensitive. First, high (vs. low) PDB perceive a hierarchy within society (Hofstede 2001) and more sensitive to status (Kim and Zhang 2014), which is closely associated with quality (Dawar and Parker 1994). Second, those high (vs. low) in PDB are less price sensitive (Lee and Lalwani 2017), which implies that they may be more concerned about quality over price. As a result, they are willing to pay top dollar for higher quality (Lalwani and Forcum 2016). Third, collectivists (high in PDB) are more risk-averse than individualists (low in PDB) in the social domain and may care about guaranteed brands.

Individuals high (vs. low) in PDB have a higher bar for quality, and thus they may be likely cues such as price (Lalwani and Forcum 2016), celebrities (Winterich et al. 2018), store name (Lee and Shavitt 2006), or brand name to judge the quality of the brand. Since a coupon means a price cut or lower price, high (vs. low) PDB will judge a brand that offers a coupon with lower quality. Second, high PDB has also been associated with a need for closure (Lee and Lalwani 2018), which has been associated with the use of heuristics (Kruglanski 2004). High (vs. low) PDB may be more likely to use the heuristic that coupons indicate low quality. Third, repeated promotions, including coupons, damage brand equity (Yoo, Donthu, and Lee 2000). Thus, coupons may be associated with the belief that brands that offer coupons are of lower quality.

> *Hypothesis 1   PDB is negatively associated with coupon proneness.*
>
> *Hypothesis 2   The relationship between PDB and coupon proneness is serially mediated by quality sensitivity and the coupons = low quality lay belief.*

Experiences are known to be greater in perceived quality variance than material purchases due to their heterogeneity and intangibility (Lovelock and Gummersson 2004).

> *Hypothesis 3   When evaluating experiential (vs. material) purchases, the tendency of low PDB individuals to use coupons will significantly decrease, whereas the tendency of high PDB individuals to use coupons will not be affected.*

STUDY 1A: FIELD STUDY WITH REAL COUPON REDEMPTION (H1)

280 people participated in a survey on a university campus in exchange for a donut. The survey included a $1.00 coupon redeemable at a local Espresso Royale Café. We assigned a unique ID to each coupon to link the coupon back to responses. A total of 77 coupons were redeemed (a 27.5% redemption rate).

We manipulated PDB using an ad with a tagline and a relevant image along with the $1.00 coupon. They were asked to write three reasons supporting the tagline.

High PDB redeemed fewer coupons than low PDB. A chi-square with coupon redemption (dummy-coded: 0 = Not redeemed, 1 = Redeemed) entered as the dependent variable and PDB conditions (dummy-coded: 0 = Low, 1 = High) entered as independent variables revealed that PDB significantly predicted coupon redemption, $\chi^2(1) = 4.03$, $p = .045$.

STUDY 1B: COUPON SCENARIO (H1)

182 MTurk workers participated in this study. We manipulated PDB with a statement writing task (Zhang, Winterich, and Mittal 2010). Participants were then given a scenario about a laptop computer and reported the likelihood to redeem the coupon (1 = not at all likely, 7 = very likely). High PDB were less likely to redeem the coupon than those in low in PDB ($M_{\text{high PDB}} = 4.29$ vs. $M_{\text{low PDB}} = 4.92$, $F(1, 180) = 4.61$, $p = .033$).

STUDY 2: THE ROLE OF QUALITY SENSITIVITY (H2)

201 MTurk workers from the US participated. PDB was measured by a 3-item scale (Zhang et al. 2010; $\alpha = .91$). We measured quality sensitivity and then measured the coupons = low quality lay belief using a three-item scale. Coupon proneness was measured (Lichtenstein et al. 1990).

Mediation (Model 4, Hayes, 2012) showed that the indirect effect of PDB on coupon proneness through quality sensitivity and the endorsement of the coupons = low quality lay belief was significant ($\beta = .06$, SE = .03, CI95 = -.0408, -.0015). Study 2 demonstrated that the effect of PDB on coupon proneness is mediated by quality sensitivity and the endorsement of the coupons = low quality lay belief.

STUDY 3: EXPERIENTIAL VERSUS MATERIAL (H3)

169 undergraduates participated in a 2 (PDB: high vs. low) × 2 (product type: material vs. experiential) design. PDB was primed as in Study 1B. Participants read a scenario about visiting a wine store, which was framed as material or experiential and then answered 2-items capturing wine coupon proneness ($\alpha = .84$).

A 2 (PDB) × 2 (product type) on coupon proneness revealed an interaction between PDB priming and product type emerged ($F(1, 165) = 5.65$, $p = .019$).

For material, those low (vs. high) in PDB showed a greater intention to redeem coupons ($M_{\text{high PDB}} = 4.08$ vs. $M_{\text{low PDB}} = 5.21$, $F(1, 167) = 10.44$, $p < .01$). However, no difference for experiential ($M_{\text{high PDB}} = 4.14$ vs. $M_{\text{low PDB}} = 4.08$, NS). For low PDB, a main effect of product type showed a decreased tendency to redeem coupons when framed as experiential (vs. material). For high PDB, no main effect of product type. Marketers that issue coupons should situationally lower the consumer's PDB as a way of enhancing coupon redemption. Further, due to the role of quality sensitivity, low PDB who are more coupon prone than high PDB, should not be presented with situational cues or products that enhance quality sensitivity in order to maintain the consumer tendency to use coupons.

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Come Sail Away With(Out) Me: When Asymmetrical Decisional Control Makes Group Experiences Unappealing

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EXTENDED ABSTRACT:

Consumers often take part in group experiences – from going to a restaurant with the family to backpacking with friends. Despite the ubiquity and complexity of such experiences, the research on joint consumption has focused mostly on examining the experiential utility obtained in dyads (Raghunathan & Corfman 2006; Ramanathan & McGill 2007), and given little attention to factors that could impact consumers' decisions to engage in group activities in the first place.

In this research, we examine how the expected distribution of decisional control within the group – i.e., the extent to which one or more participants within the group determine key aspects of the joint experience – influences consumers' preference for group vs. solo activities. For example, imagine that Jane wants to have dinner at a restaurant. She can go alone or with a group of friends. Does the extent to which Jane (vs. someone else in the group) has asymmetrically higher decisional control – e.g., decides which restaurant to go to – make Jane favor engaging in the experience as part of a group (vs. alone)?

The work on choice suggests that having higher decisional control is desirable as it allows Jane to design the dinner experience in a way that will satisfy her individual consumption goals (Botti & McGill 2006; Iyengar & Lepper 2002). However, group contexts require the balancing of individual and group goals (Ariely & Levav 2000) and the literature on social loafing has shown that consumers tend to disengage in collective (vs. individual) activities. Extending this work to consumption experiences, we propose that Jane's choice between a solo and a group activity will be influenced not only by her individual goal of utility maximization, but also by her concern for the group outcome. We further argue that higher decisional control in group settings is associated with greater responsibility for the group outcome, which induces feelings of stress. As feeling anxious is undesirable (Etkin et al. 2015), we hypothesize that consumers would avoid group experiences when they have high (vs. low) decisional control. We test this theoretical framework in four studies.

In study 1A, participants were randomly assigned to one of three conditions: high, low, and neutral (no mention) decisional control. They imagined planning to rent a boat during the weekend and were asked to choose between two rental options: a solo boat and a larger boat for up to six people. In the high (low) decisional control condition, participants were told that if they chose the group option, they (one of their friends) would be in charge of coordinating the activity. In the neutral condition, no information about the distribution of decisional control was provided. As manipulation checks indicated that the neutral and low decisional control conditions were not different, the two groups were collapsed. The results supported the hypothesized relationship between decisional control and engagement in the group experience - participants in the high (vs. low) decisional control condition were less likely to choose the group rental option.

Study 1B replicated the effect and addressed several potential confounds. First, we used a low-stakes context – having dinner in a restaurant alone vs. with 5-6 friends – to test whether the distaste for the group experience in the high control condition will be observed for everyday experiences. Additionally, the scenario listed all decisions that had to be made and reminded participants that they will need to make the same decisions in the solo experience. Thus, the only difference between the high and low decisional control conditions was who was responsible for making the group decisions. The results replicated the proposed effect – participants in the high (vs. low) decisional control condition were less likely to select the group experience.

Study 2 tested the proposed sequential mediation process, using the modified boat rental scenario. We replicated the main effect of decisional control and observed the proposed mediation process – participants in the high decisional control condition reported feeling greater responsibility over the group outcome, which induced higher feelings of stress and explained their distaste for the group rental option. The reverse mediation model (stress → responsibility) was not supported.

Study 3 tested the proposed model with a consequential dependent variable in a different context. We assigned participants to complete a video task alone or in a group with fellow MTukers and asked them to choose whether they want to select the video themselves or have it randomly assigned. We hypothesized that participants who wanted greater engagement in the experience would opt to choose the video by themselves. Additionally, half of the participants assigned to the group experience were told that they would see the other group members' evaluations of the task (group-public condition), while the other half – that the video evaluations were confidential and would not be shared (group-private condition). We reasoned that the observability of the group outcome is a necessary condition for experiencing accountability and stress (Lerner & Tetlock 1999). Thus, we expected and found that participants in the group-public condition favored lower engagement (by opting that the survey select the video) than those in the alone and group-private conditions (who preferred to select the video themselves to ensure preference match). Qualitative data collected after participants made their choice provided additional support for this reasoning (available upon request).

Overall, this research suggests that the utility of joint consumption depends, to some extent, on the distribution of decisional control within the group. We demonstrate an interesting case of social loafing in consumption experiences – consumers are less likely to engage in group experiences (either by opting to complete the experience alone or by choosing to outsource key decisions) when they expect to have asymmetrically higher decisional control compared to the rest of the group. Our findings suggest that this is driven by increased feelings of stress, induced by feelings of greater responsibility over the group outcome. Future research will investigate interventions to decrease the perceived stress of asymmetrical decisional control in order to encourage group consumption.

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(Il)Legitimate in the Homeland? Repatriate Migrants' Consumption in a Complex Institutional Environment

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EXTENDED ABSTRACT

The institutional environment of migrant consumers addressed in research has become more complex over time. Extant research initially focused on the individual level of consumer acculturation (Askegaard, Arnould, and Kjeldgaard 2005; Oswald 1999; Peñaloza 1994) or describes how sociocultural elements and institutional actors shape consumers (Üstüner and Holt 2007; Veresiu and Giesler 2018). We claim that extant literature does not capture institutional complexity to a suffcient extent. First, there is no interinstitutional conflict, that is, the institutional forces all pursue the same goal. For instance, Veresiu and Giesler's (2018) institutional actors exhibit different consumer socialization strategies, but they all shape and legitimize the ethnic consumer similarly. Second, there is no intrainstitutional conflict, that is, each institutional force is inherently consistent and acts homogenously upon the consumer. Introducing the theoretical lens of institutional logics to the research area, we intend to counter this coherence of institutional forces.

We contribute to research by showing that the macro forces state and market can be conflicted both inter- and intrainstitutionally, resulting in inconsistent notions of legitimacy for the migrant group. Additionally, meso forces, group-specific institutions and indigenous consumers, may have their own logics and contribute to a high institutional complexity. On a micro level, we show how this complexity triggers strategies consumers use to navigate the tensions. Moreover, the majority of extant studies investigates cases in which home and host culture are clearly distinct (e.g., Askegaard, Arnould, and Kjeldgaard 2005; Peñaloza 1994). Research has not yet taken a closer look at a case where this distinction might not be as clear for consumers – repatriate migration.

Our study is set in the context of ethnic German repatriate migrants who returned to Germany after they themselves and their ancestors had lived in the former Soviet Union – their place of diaspora – for generations. Repatriate migration refers to "the return of ethnic minorities to their historic homelands" (Remennick 2003, p. 24). People living in the diaspora are characterized by a strong relation to their ancestors' homeland as well as the maintenance of boundaries to the host society (Brubaker 2005). Frequently, a possibly irrational myth of return to the ancestral homeland is believed in over generations (Stefansson 2004).

Truths arise for all stakeholders from studying this unheard segment of the population, making this study relevant for all stakeholders. On a macro level, a holistic picture of migrants' institutional frame allows the state to consider migrants adequately in terms of legislation and assistance programs. An understanding of the interplay between different institutional signals and consumption activities allows market actors to adapt their offerings. On a meso level, our findings help repatriate institutions to uncover what both repatriates' and indigenes' relation to their institution is and how these institutions may become more well-known. Furthermore, indigenes learn about their fellow citizens which shall reduce uncertainty and facilitate communication as well as joint consumption activities. Last but not least, this article is important for repatriate consumers themselves. Recent migration movements have caught the attention of the public, making repatriate consumers gradually fall into oblivion and becoming unheard. This article aims to give them a voice.

This ethnographic study includes interview, field, and archival data. 35 interviews have been conducted with repatriate consumers, indigenous consumers and institutional represenatives. They are complemented by field data, such as observations at exhibitions and events. Archival data include newspaper articles, court judgments as well as other relevant publications.

Findings show that repatriate consumers indeed lived a diasporic consumer culture in the former Soviet Union, preserving, for instance, German dishes and traditions. After repatriation, institutional complexity is evident in the following ways. First, the state exhibits a logic of equality, as they are based on Federal Expellee Law legally conceived of as Germans, not migrants. Second, the key logic of the market is the logic of participation, based on fulfilling consumer demands. Both logics are conflicted intrainstitutionally, as state representatives at times do not reflect the welcoming logic of equality and the market can be a source of segregation, for instance in the housing market. On a meso level, repatriate institutions and indigenous consumers increase institutional complexity. Some repatriate institutions represent a logic of extension, claiming a distinct consumer culture which complements German consumer culture, but this logic conflicts with an emphasis on the Russian language and a representation of transnational foreignness of other repatriate institutions. Indigenous consumers view repatriate consumers as immigrants, following a logic of otherness, but at the same time indigenous consumers consider repatriate consumers inconspicuous and talk positively about them.

Repatriate consumers themselves navigate this institutional tension in various ways: via illusion, extension, and re-diasporization. Some repatriate consumers strive to defend their legitimacy via illusion. They sustain the state logic of equality, pretending to be accepted, while their consumption does not indicate this. To reinforce this illusion, they emphasize their own consumption's superiority vis-à-vis other repatriates'. The second strategy involves the logic of extension and complementing German consumer culture. In other words, repatriates' consumer practices and identity are neither German nor Russian, but a third kind, Russian-German. Lastly, consumers associated with re-diasporization exhibit a stronger affiliation to the place of diaspora than the ancestral homeland. Consumers engaging in re-diasporization become a diaspora again, but of the former host country. Re-diasporization is associated with a sense of illegitimacy and can either occur involuntarily or voluntarily.

This study demonstrates that extant research has painted an incomplete picture of the institutional environment of migrants. While Üstüner and Holt (2007) talk about the 'shattered identity' of migrant consumers, our study shows that institutions have a 'shattered identity' as well.

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When 'Bad' is Good: The Magnetic Attraction of Villains

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EXTENDED ABSTRACT

Prior research suggests people are repulsed by feeling similar to someone with negative attributes (Jiang et al. 2009; Novak and Lerner 1968). In this work, we propose that people can also be drawn *towards* similar, 'bad' others. We explore this in an important consumer behavior context – attraction to characters in stories.

One reason people avoid similar, negative others is such individuals threaten one's self. Similarity to negative others might imply vulnerability to their characteristics. In prior studies participants disliked similar "obnoxious" others (Taylor and Mettee 1971) due to fear their similarity implied vulnerability to unwanted afflictions.

However, what if individuals' sense of self were not threatened by a similar, negative individual? We propose, in the absence of self-threat, similar others are more self-relevant and thus inclined to garner interest. Prior work suggests self-relevance is associated with increased involvement (Celsi and Olson 1988; Konijn and Hoorn 2005; Petty and Cacioppo 1986). People might be more interested in seeking out information for similar others, even negative ones.

We look at one domain where people may experience less self-threat when compared to similar, negative others: stories. Stories are encapsulated worlds; the "harm" committed by a story character cannot impact real-world individuals, so people find perspective-taking in a story less threatening (Johnson et al. 2013). With no potential for threat, individuals might be *more* engaged when similar to a story's villain. Thus, while consumers are repulsed by similar 'bad' others in real life (Novak and Lerner 1968), they might be drawn toward stories with similar villains. We test this notion across four studies.

Study 1: This study uses data from CharacTour, a social media platform on which users take a personality quiz, see story characters' similarity to themselves, and become "fans" of characters. We have one line of data for each of 3,963 characters. Each character has a score on various traits; fans take a quiz on the same traits, and the data indicates 1) the character's score on each trait, 2) what percent of that character's fans "have" each trait, where "having" a trait means having a high score (a 4 or 5), and 3) if the character is a villain. We use character trait score to predict percent of villains' fans who have that trait. We include non-villains as a baseline. We found a significant effect of character's trait score on percent of fans with that trait, controlling for differences across fans and traits. The effect was stronger for villains than non-villains.

Study 2. This experiment was 2 (hero vs. villain) x 2 (similar vs. different) x 2 (positive vs. negative traits) between-subjects. Participants (418) imagined a friend telling them about Sam, a villain/hero in a new television show. Participants saw 21 of Sam's traits and selected which four were most similar to/different from themselves. To control for valence, participants saw either all positive traits or all negative traits. They indicated show interest on a 3-item, 7-point scale, which was averaged ($\alpha = 0.95$). The similar villain led to greater show preference than the dissimilar villain ($F(1, 203) = 12.90$, $p < .001$). Similarity was attractive regardless of valence ($F(1, 203) = 2.28$, $p = .132$). In a three-way ANOVA on the full data there were no significant two- or three-way interactions (all p > 0.2), suggesting similarity had an equally positive effect for villains and heroes.

Study 3. This experiment was 2-cell (similar vs. different) between-subjects. Participants (376) saw information "from a friend" about Sam, the villain of a new show. Participants completed the similarity manipulation and dependent measures from Study 2 (aver-

aged - $\alpha = 0.95$) and answered Houston and Walker's (1996) 6-item, 7-point scale measuring perceived self-relevance of Sam (averaged - $\alpha = 0.97$). We tested for mediation using the PROCESS macro (model 4) in SPSS with 5,000 bootstrapping samples (Preacher, Rucker, and Hayes 2007; Hayes 2013) with similarity condition as the independent variable, show preference as the dependent variable, and self-relevance as the mediator. Similarity significantly predicted self-relevance ($B = 0.49$, SE = 0.10, $t = 4.88$, $p < .001$), self-relevance significantly predicted show preference ($B = 0.71$, SE = 0.04, $t = 19.06$, $p < .001$), and the indirect effect of similarity on show preference through self-relevance was significant (Effect = 0.35, SE = 0.07; 95% CI [0.20, 0.50]). This suggests the effect of similarity on show preference is mediated by perceived self-relevance.

Study 4. This experiment, preregistered on AsPredicted.org, was 2 (similar vs. not similar) x 2 (date vs. alone) between-subjects. Participants (394) first learned people who are similar to others are often assumed to be similar on other dimensions. In a "separate" task, participants decided what to do alone or on a first date after seeing a screen shot of a text message "from a close friend." The friend recommends a movie, *Fractured Mind*, in which the villain Sam kills someone. In the similar conditions, the text also describes Sam as similar to the participant. Participants answered the same movie preference items as previous studies (averaged - $\alpha = 0.96$). A two-way ANOVA showed a significant interaction effect between similarity and context (date vs. alone - $F(1, 390) = 4.01$, $p < .046$) such that in the first date conditions similarity significantly decreased movie preference ($F(1,390) = 6.41$, $p = .012$), suggesting the context made similarity aversive despite the villain being embedded in a story. In the alone conditions, similarity non-significantly increased movie preference ($F(1,390) = 0.09$, $p = .764$).

Feeling similar to a 'bad' person can be threatening (Novak and Lerner 1968). However, across three experiments and company data, we demonstrate that within stories the opposite seems true – similarity to a 'bad' story character is attractive. This has potential implications for consumer behavior. Despite their bad behavior, consumers seem to willingly identify with villains. However, prior work shows similarity to bad others can increase bad behavior. This suggests villain-loving consumers might be desensitizing themselves to immorality – meaning it may be risky discovering your "dark side."

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The Brand That Wasn't There: The Impact of
Product Displacement on Brand Outcomes

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EXTENDED ABSTRACT

Traditional product placement has found generally positive outcomes for brands such as attitudes, recognition, and choice (d'Astous and Sequin 1999; Russell 2002). However, high product placement licensing fees have led marketers to reduce spending on this tactic (Block 2010). In addition to financial reasons, companies may refuse to allow entertainment producers usage of their brands as a means to protect brand image. For example, Mercedes-Benz and Coca-Cola refused to allow *Slumdog Milionnaire* to use their logos because they believed association with the slums of Mumbai would harm their brand image (Brodesser-akner 2009). Both cases result in the brand logo being removed, or "displaced" from the production either physically or digitally to adhere to copyright law, a practice we define as product displacement. Interestingly, although the practice of product displacement is quite commonplace (e.g., *Nashville, Scrubs*), no research has examined how consumers respond psychologically to a displaced brand or the impact product displacement might have on brand outcomes. This research provides the first empirical investigation of product displacement and explores both the psychological impact of exposure to a displaced brand and the downstream marketing consequences of such exposure.

To guide our investigation, we conducted an exploratory study using EEG technology. Participants (n=139) watched a clip from the movie *Elf* in which Coca-Cola was placed or the logo digitally displaced while wearing an EEG headset. In the displacement video, only a red cola bottle was visible. The EEG headset measured emotional reactions and engagement in real-time. After watching the clip and completing an unrelated study, we measured unaided brand recall by asking participants to list the top three brands that came to mind. If Coca-Cola was recalled in the first, second, third position, or not mentioned, we assigned scores of 3, 2, 1, and 0 respectively. EEG results showed that when the cola bottle appeared on the screen, participant engagement levels were significantly higher in the displacement vs. placement condition ($p < .05$). Near the end of video, however, displacement elicited significantly higher frustration. Finally, unaided recall was significantly stronger in displacement v. placement clip ($p = .002$). Thus, it appears that product displacement has both psychological and practical consequences. We propose a framework to understand this phenomenon.

We propose that the psychological experience and consequences of displacement (vs. placement) depend on consumer need for cognition (NFC, Cacioppo and Petty 1982). Specifically, we hypothesize that product displacement *increases* engagement among high need for cognition (HNFC) consumers because the displaced brand aligns with their natural motivation and enjoyment to process information. This heightened engagement leads to positive marketing benefits for the brand. Conversely, we propose that product displacement *decreases* engagement among low need for cognition (LNFC) consumers and reduces marketing benefits relative to traditional product placement. This is because LNFC consumers actively avoid effortful processing. Being forced to engage in effortful processing through exposure to the displaced brand elicits a negative emotional reaction, which we propose decreases engagement.

Study 1 shows support for our full framework and demonstrates the moderating role of need for cognition and the mediating role of engagement on the downstream consequences of product displace-

ment. Participants (n=227) first completed the NFC scale and then watched one of the two *Elf* clips from the EEG study. Next, they completed engagement measures, the consumption emotions scale (Richins 1997), and brand attitude measures. Supporting our predictions, product displacement led to higher (lower) engagement than product placement among HNFC (LNFC) participants and the reduced engagement among LNFC was driven by a negative emotional reaction. Engagement significantly predicted brand attitude ($p < .05$) but was dependent on NFC. Among LNFC participants, placement led to higher brand attitudes than displacement. However, among HNFC participants, displacement led to higher attitudes than placement. Importantly, both opposing effects were mediated by engagement.

Study 2 provides process support through moderation of engagement. Specifically, we show that when engagement is encouraged (v. discouraged) consumers report positive downstream consequences in response to displacement. The reverse patter is found when engagement is discouraged – traditional product placement leads to more positive downstream consequences. Participants (n=119) were randomly assigned in a 2 (Displacement, Placement) x 2 (Engagement: Low, High) design. Participants watched one of the two *Elf* clips in which Coca-Cola was placed or displaced. However, just before watching the clip, participants received the engagement manipulation via instructions (Green and Brock 2000). Participants in the low engagement condition were given instructions to mitigate engagement, and were told to focus on specific details of the conversation for a later recall task. However, participants in the high engagement condition were given instructions to foster engagement, and were told to watch the clip as if they were in a movie theatre. Finally, participants completed the brand attitude measures from study 1. Results revealed the expected interaction ($p = .002$). Participants whose engagement was mitigated exhibited higher brand attitudes in the placement vs. displacement condition (p = .007) However, when engagement was fostered, participants expressed higher brand attitudes in the displacement vs. placement conditions ($p = .07$).

Study 3 focused on the detrimental effects of displacement among low NFC consumers and provided theoretical support for our claim that the negative consequences of displacement are driven by a negative emotional reaction in response to forced processing. If this negative emotional experience drives engagement, then LNFC who are able to attribute their negative affect to a positive experience should result in positive brand outcomes upon exposure to displacement. Participants (n=375) completed the NFC scale then either received the negative emotion attribution or moved directly on to the clip. Participants in the negative attribution condition were told that certain clips elicited feelings of frustration, but that feeling was actually indicative of enjoyment. Participants then watched a clip from *Fight Club* in which the Starbucks brand logo was displaced from the coffee cup. After a filler study, we assessed brand recall by asking participants what brands they saw in the clip (1 = Starbucks, 0 = Did Not Recall). Given that all participants saw a displacement clip, no brands were actually present. The expected NFC x attribution condition emerged ($p = .03$). In the control condition, previous results were replicated in that recall was higher for high (vs. low) NFC ($p < .01$). However, when LNFC participants attributed negative emotional reactions to accurately experiencing the clip, brand recall improved

relative to the attribution absent condition (B_{JN} = -.78, -1.58 SD). Thus, attribution of one's emotional reaction to a proper viewing experience led LNFC participants to behave like HNFC participations such that brand recall of the displaced brand increased.

This research provides the first empirical investigation into product displacement. We demonstrate the moderating role of NFC and show that displacement can have positive effects for brands because it increases engagement with the medium. However, the opposite occurs for LNFC consumers. Indeed, the brand that wasn't there may be the very one we want to buy.

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Mind the Gap: Advice Givers and Receivers in Well-Being Communication

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EXTENDED ABSTRACT

Well-being communicators (advice givers) – often encounter resistance and non-compliance from consumer (advice receivers) (e.g., Andrews et al. 2014; Snyder et al. 2004). We explore reasons for this reality and offer ways to improve effective well-being communication strategies (e.g., Wang, Mukhopadhyay, and Patrick 2017). Specifically, we identify a systematic misuse of communication tone: Well-being communication is frequently either too assertive (too commanding) or not assertive enough (too gentle).

Why do advice givers misuse assertiveness and how are advice receivers likely to respond to this communication? Following research on supportive interaction (Feng and MacGeorge 2010), we distinguish between two major components of advice situations: advice receiver's *need* for advice and *wish* for advice.

Need for advice is an objective, observable condition of the advice receiver. *Wish for advice*, is the advice receiver's *subjective* wish to receive advice. Literature shows that wish for advice and need for advice do not necessarily correlate. We therefore hypothesize that, due to egocentric bias (Abbate, Boca, and Gendolla 2016), advice givers choose the tone of their communications based on assumptions they make about the advice receiver's *need* for advice and discount their wish for advice. For advice receivers, conversely, *wish* for advice is a major determinant of response to advice level of assertiveness (e.g., Kausel et al. 2015).

It would be valuable, both from a theoretical and from a practical point of view, to identify ways to minimize the gap between advice givers and receivers. We test two plausible solutions.

1. **Advice giver's perspective**: Empathy allows one to place oneself in someone else's shoes and assess a situation as if it were affecting one's own self (Argo, Zhu, and Dahl 2008) and it can be a powerful driver for more moral consideration about others (Kirmani et al. 2017). We suggest therefore that the more empathetic the advice giver with the advice receiver, the less egocentric she is and more likely to choose the tone based on advice receiver's *wish* for advice.

2. **Advice receiver's perspective**: As noted earlier, in situations when wish and need for advice align, miscommunication is less likely to be an issue. Thus, one way to minimize the gap is by increasing the correlation between wish and need for advice. We suggest that this can be achieved by increasing the perceived severity of the well-being situation, as this should make advice receivers feel greater anxiety and loss of control, resulting in a greater wish for advice (Gino, Wood Brooks, and Schweitzer 2012), thus aligning responses to tone assertiveness according to need for advice.

METHOD

We conducted five studies that highlight the motivational gap (Studies 1-3), and then tested two potential solutions (Studies 4-5).

In **Study 1,** 161 MTurk participants read one of four descriptions of Kate (an imagined woman described as having minor/sharp degradation in her health and either wishing or not wishing to receive advice about it) and chose a more/less assertive callout to persuade Kate to eat more vegetables. Participants' preference of tone asser-

tiveness depended on their estimation of Kate's need for advice and not on her wish for advice.

In **Study 2**, a field experiment, 200 students received a more/less assertive email encouraging them to add 5 daily minutes of abdomen exercise. One week later, recipients reported how many minutes and how many times they exercised that week. Number of minutes and times of exercise following a more/less assertive phrase significantly depended on participant's wish for advice but not need for advice.

Study 3 documents a shift from reliance on wish for advice to reliance on need for advice as the role of the participant shifts from advice receiver to a giver. 208 MTurkers first read either a more/less assertive PSA regarding hurricane preparedness and indicated their likelihood to follow the recommendation. Next, participants chose between a more/less assertive PSA to citizens of a safe/unsafe neighborhood. Participants' likelihood to follow the recommendation for hurricane preparedness depended on their wish for advice, but not need for advice. Conversely, their choice of assertiveness depended on their evaluation of citizen's need for advice but not wish for advice.

Next, Studies 4 and 5 test two approaches for closing the gap between advice givers and receivers. In **Study 4**, 800 students took an objective perspective (low empathy) or a high-school student's perspective (high empathy) and chose a more/less assertive call for students to meet with a college advisor. In low empathy, we found no interaction of high-school student's wish and need for advice, only a main effect of need for advice. However, in high-empathy, when high-school students had high wish for advice, participants preferred a more assertive tone regardless of students' need for advice. In low wish for advice, participants preferred a more assertive tone when students had high need for advice than when they had low need for advice.

Finally, **Study 5** takes the advice receiver's perspective. 487 Mturkers imagined that they discovered a more/less severe skin condition (paper-cut/melanoma) and indicated intentions to adhere to a more/less assertive message about their skin. While the correlation between need and wish for advice within the less severe condition was significant but low, for the severe condition the correlation was much higher. Further, in the severe condition adherence with the message was driven by both need and wish for advice, but in the low severity - only by wish for advice.

CONCLUSION

This work combines understanding of communication, consumer well-being, and linguistics to advance knowledge on a key real-world problem: the relatively low effectiveness of well-being communication. We identify a *gap* between advice givers and receivers' motivations, which underlies the misuse of tone assertiveness. We distinguish between *need* and *wish* for advice and explain this gap in terms of an egocentric bias. As need for advice and wish for advice are frequently not aligned, this causes a motivational gap and a mismatch of assertiveness that is detrimental to the success of well-being communication. Finally, we test two practically viable solutions to minimize this gap, thus increasing the effectiveness of well-being communication.

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Status Consumption and a Luxury-Brand Inspired Subculture: Paradoxes of Physical Well-Being for Impoverished Consumers

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EXTENDED ABSTRACT

Status consumption, as well as related concepts, has been studied extensively in consumer research and psychology (Crockett 2017; Dittmar et al. 2014; Dubois and Ordabayeva 2015; Mandel et al. 2017; Saatcioglu and Ozanne 2013; Üstüner and Holt 2007, 2010). These consumption practices are means by which consumers can signal status-based identity and potentially ameliorate economic and psychological insecurities (Kasser and Kanner 2004). Importantly, brands are key communicative, symbolic, and social devices (Askegaard 2006), and they have been central to the development of brand and consumption communities (Cova and Cova 2002; Muniz and O'Guinn 2001). Empirical work documents that status consumption has both positive and negative consequences for subjective well-being (Burroughs and Rindfleisch 2002; Diener 1984; Dittmar et al. 2014; Mick et al. 2011). Consumer researchers, however, have given less attention to the effects of status consumption on other aspects of well-being, including self-appraisals, clinical psychological disorders, and physical well-being (Ditttmar et al. 2014).

We take a phenomenological approach to explore status consumption in relation to the well-being of members of Izikhothane, a luxury brand-inspired subculture (Capron 2013; Crosswaite 2014). Our Izikhothane informants are young adult black males who wear luxury Italian clothing and shoe brands and participate in crews which engage in brand showmanship and competition that often culminate in battles that involve staining, ripping, and burning of the high-end attire (Mnisi 2015; Nkosi 2011). They reside in Soweto, South Africa, which despite being impoverished (60% of households earn less than $3,000 per year, "District in Detail: SOWETO" 2011), has consumers who engage in the global luxury brandscape via the internet, social media, and locally established global luxury retail stores.

Our research program (2015 to present) involves primary data collections and secondary data sources. INFUSION Knowledge Hub, a local research firm, conducted four primary data collections in 2015: preliminary interviews (four informants), a focus group (five informants), observation of battle, and depth interviews (39 informants), and in 2018, follow-up depth interviews with 14 of the 2015 informants. The firm was responsible for recording of the interview, translation to English, transcription, and member checking. The interviews and focus group each lasted 60-90 minutes; a photographer took photographs and video during the interview. Informants were compensated with a shopping voucher to a local mall.

Our review of transcripts focused on the physical well-being among members of this brand-inspired subculture. We began with a within-crew analysis to determine if there were specific nuances by crew within the Izikhothane subculture. Finding none, we continued with a within-case and across-case analysis of informants' transcripts (Glaser and Strauss 1967; Spiggle 1994; Strauss and Corbin 1990) with attention to our focus on physical well-being.

STATUS CONSUMPTION AND PHYSICAL WELL-BEING

Our informants provide insights about how participation in the Izikhothane subculture concurrently provides for, yet jeopardizes their physical well-being. In the former case, Izikhothane serves as a safety net from other more nefarious and dangerous activities, including participation in street gangs noted for their violence. Some purport that the gang culture in South Africa, in many ways, was a response to social deprivation giving black youth dignity, belongingness, and purpose (Dissel 1998; Glaser 2000). Burnett (1999) has reported on gangs in South Africa who committed petty and violent crimes to access money and material possessions they were unable to acquire on their own. Interestingly, our informants reference how Izikhothane provides them a lifestyle that enhances their psychological well-being and protects them from being involved in more dangerous gangs and/or criminal activities. Informants share how their engagement with Izikhothane keeps them out of trouble. Further, informants comment on the cohesiveness and belonging among Izikhothane crew members, how they hang together and ensure the physical well-being of their fellow crew members.

Despite these perspectives on physical well-being associated with Izikhothane, Izikhothane fame, notoriety, and flashy expensive attire draw the attention of jealous rivals, drug addicts, and street gangs who recognize Izikhothane as a source of wealth. Physical risk can take the form of fighting with members of other Izikhothane crews. Izikhothane battles between crews typically involve taunting, dancing, and throwing yogurt and alcohol on one another with the goal of destroying the high-end shoes and clothing worn by the other crew; but, with some frequency, fights break out after battles. Alcohol consumption, a staple of the Izikhothane lifestyle, presents another physical risk, ranging from symptoms of excess consumption to the tragedy of death. Finally, our informants talk freely about suicide because of the pressures of participating in this subculture, which requires significant financial means that are often far beyond the resources of members and their families of impoverished Soweto.

CONCLUSION AND CONTRIBUTIONS

Our research offers novel insights about the effects of status consumption within an impoverished context exploring the effects on physical well-being. We observe both the paradoxical bright and the dark sides of Izikhothane as related to physical safety and physical dangers. The Izikhothane lifestyle concurrently offers a "safer" alternative to immoral and reprehensible behaviors with increased physical risk, yet a "more dangerous" path with the potential for increased alcohol and drug consumption, being assaulted and robbed, and suicide. Our research provides a visceral understanding of the lived experiences of impoverished young adult male consumers contextualizing their status consumption as related to physical well-being, adding a critical real-life powerless consumer backdrop to build upon experimental work (Dubois, Rucker, and Galinsky 2015; Ordabayeva and Chandon 2011; Rucker and Galinsky 2008) and secondary data analyses which stress the desperation of impoverished consumers (Martin and Hill 2012). Further, we examine status consumption from a holistic perspective focusing on group membership (Schouten and McAlexander 1995) and disconformity and resistance (Bellezza, Gino, and Keinan 2014; Ozanne, Hill, and Wright 1998), two aspects of status consumption that have received little attention in consumer research. Further, building on past work (e.g., Belk 1999; Hill 2001; Üstüner and Holt 2010), we contribute much needed attention to consumption practices of impoverished consumers.

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Income Inequality and Consumer Preference for
Private Labels versus National Brands

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EXTENDED ABSTRACT

Income inequality in the U.S. is at an all-time high (World Bank 2017). Although many argue that income inequality is detrimental to consumer welfare, little is known whether and how income inequality affects everyday consumer decision-making. To shed some light on this issue, we examine the relation between income inequality and grocery shoppers' preference for private labels (i.e., store brands) versus national brands. The demand for private labels, which are cheaper alternatives to national brands, has been hampered as shoppers tend to perceive them as a "sacrifice" (Deloitte, 2015). Thus, it is important to examine the role of income inequality and social comparisons in consumer demand for private labels, contributing to the literature by demonstrating the implications of inequality for consumers' routine purchase decisions.

Prior studies on inequality and consumer behavior have focused primarily on conspicuous consumption. For instance, as compared with those living in low income inequality states, Americans who live in high income inequality states exhibit greater online search interest for positional goods such as designer clothes and expensive jewelry (Walasek & Brown, 2015) and are more likely to tweet about luxury brands (Walasek et al., 2018). These results are consistent with the social rank hypothesis, which posits that inequality enhances people's attention to status symbols. Nevertheless, when it comes to actual spending, household expenditure on conspicuous consumption decreases with income inequality (Hwang & Lee, 2017). As Ordabayeva and Chandon (2010) argues, high inequality decreases bottom-tier consumers' desire for conspicuous consumption because acquiring positional goods would have limited impact on one's relative status in the society.

The goal of our research is to extend the focus of extant literature on income inequality beyond the domain of conspicuous consumption and luxury products, many of which cannot be afforded by the average American consumer. Our context is grocery shopping for which social comparison and interpersonal influence are still relevant factors (e.g., Calder & Burnkrant, 1977; Hui et al., 2009). As pointed out by Veblen (1899), consumption patterns and tastes of the upper class serve as a reference point for those in other social classes, which holds true for inconspicuous consumption as well (Currid-Halkett 2017). In particular, while national brands are often associated with the consumption activity of upper-class consumers, private labels are perceived to have lower quality and typically characterized as value options for lower-class consumers (e.g., Richardson et al., 1996; Sethuraman & Cole, 1999; Steenkamp et al., 2010). We maintain that income inequality catalyzes social comparisons targeted toward achieving a "better" living through the purchase and consumption of premium, national brands rather than cheap, private labels. Accordingly, we predict that grocery shoppers' preference for private labels versus national brands decreases with income inequality. We test our thesis in six studies using both field and experimental data. Our measure of income inequality is the Gini coefficient measured at the state- or county-level (depending on data availability).

Study 1 tests the premise that shoppers living in places with high versus low inequality hold less favorable attitudes toward private label items. For this test, we analyze a sample of online product reviews of a private label sold by Amazon—"365 Everyday Value". We find that reviewers living in states with high income inequality rate private label items less favorably than those living in states with low income inequality.

Study 2 uses online search data from Google Trends for the period 2010-2016. We regressed state-level relative search interest for terms like "milk brands", "water brands", and "Great Value" (i.e., Walmart's private label) on state-level Gini coefficient and control variables. We find that relative search interest for grocery product brands in several categories increases with income inequality, whereas the opposite is true for a commonly available private label. This finding provides support for the premise that consumers' interest in national brands and private labels depends on income inequality.

Study 3 employs actual grocery purchase data from the Nielsen Consumer Panel for the period 2010-2016. For each year, we calculated households' private label purchases as a proportion of their total purchases. We regressed the proportion of private label purchases on county-level Gini coefficient and control variables. As expected, the results show that shoppers living in counties with high income inequality have a lower proportion of private label purchases than those living in counties with low income inequality.

Study 4 replicates this finding in a lab setting using a hypothetical grocery shopping task, in which MTurk participants were presented with four choices (2 national brands and 2 private labels) within five product categories such as milk and eggs. Supporting our prediction, the proportion of private label purchases again decreases with county-level income inequality.

Study 5 provides process evidence via a moderation analysis. MTurk participants completed the same grocery shopping task from study 3. As a moderator, we measured participants' social comparison orientation (SCO) using five items from Gibbons and Buunk (1999), e.g., "I always pay a lot of attention to how I do things compared with how others do things". As predicted, we find that the negative relation between the proportion of private label purchases and income inequality is magnified by participants' SCO.

Study 6 presents additional process evidence by priming perceived income inequality (via a short video clip) and measuring MTurk participants' tendency to believe they deserve to buy better things as a potential mediator (e.g., "I feel I deserve to buy better things"). Supporting the proposed underlying mechanism, a mediation analysis reveals that priming perceived income inequality has a negative indirect effect on the proportion of private label purchases through feelings of deserving to buy better things.

Our results demonstrate that consumers' preference for private labels versus national brands is a function of income inequality they experience. A desire to consume "better" brands reduces grocery shoppers' purchases of private labels in the face of high income inequality.

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The Effect of Empty Space on Choice Deferral

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EXTENDED ABSTRACT

Choice deferral is ubiquitous among consumers. There has been a great deal of research examining factors that influence consumers' choice deferral. Prior work has shown that choice deferral often arises from perceived decisional conflict or difficulty when the trade-off between important attributes is hard to make (e.g., Tversky and Shafir 1992). In the current project, we contend that consumers may defer to make a choice because of the existence of alternatives that are unavailable in the given choice set. Further, the extent to which consumers may think of outside alternatives may be swayed by incidental cues such as the space surrounding a choice set.

Empty space is a fundamental component in visual communications. Findings from different lines of research suggest that empty space has been widely adopted to signal prestige and luxury (Jewler and Drewniany 2000). Recently, a growing body of work has examined the effect of space on consumer behaviors (e.g., Kwan, Dai and Wyer 2017; Pracejus, O'Guinn and Olsen 2013). Inspired by prior research, we posit that when the space surrounding a choice set is substantial (vs. limited), consumers are more likely to think of other alternatives that are absent from the current choice set, which consequently leads to greater choice deferral.

Study 1 was designed to provide initial evidence for the proposed effect. We recruited undergraduates from a university in Hong Kong to complete a study for a payment of $5. Once entering the lab, they had a chance to choose a pen from a set of five for $1 and were told that there would be another chance to choose from a different set by the end of the session if they decided not to choose now. As the space manipulation, we showed them either an A4 (empty) or A5 (full) pasteboard with five pens showcasing on it. We recorded whether they purchased the pen and at which stage they did so. Logistic regression on purchase tendency yielded a significant effect ($B = 1.20$, SE = .451, $\chi^2(1) = 7.079$, $p = .008$), suggesting that participants became less likely to forgo their payment in exchange for a pen in the empty space condition. Moreover, participants were more likely to defer in the loose (vs. narrow) margin condition (Mann-Whitney $U = 787.5$, $p = 0.021$).

Study 2 replicated the effect in a more controlled context. We recruited US participants from an online platform Mechanical Turk (MTurk) powered by Amazon. They were first asked to imagine that they were hungry at the moment and wanted to grab something fresh to eat. Then they were randomly presented one of two salad menus (space: empty vs. full) and asked to make a choice. Consistent with our hypothesis, we found that participants were more likely to defer their decisions in the empty space condition ($B = .904$, $Wald\ Z = 5.077$, $p = .024$). Moreover, we also examined a series of potential alternative accounts (e.g., perceived attractiveness, attention allocation, time pressure, etc.) and none of these was influenced by the space manipulation.

Study 3 was designed to assess the consideration of alternatives not included in a given set as the underlying mechanism. Participants recruited from MTurk were exposed to a screen shot of a pizza online ordering website and asked to indicated their choice of pizza. Afterwards, we asked participants to list all the thoughts and feelings that came to their minds when deciding which pizza to order. As predicted, a logistic regression on their choice indicated that more participants indicated to go to another website when the empty space was substantial ($B = -1.198$, $Wald\ Z = 7.346$, $p = .007$). Also, the substantial empty space on the webpage enhanced the extent to which participants mentioned other unavailable options ($B = -.904$, $Wald\ Z = 5.102$, $p = .024$). More importantly, mediation analyses yielded a significant indirect effect of listed thoughts (95% CI: .0253 to 1.0239, SE = .255, Z = 2.059, $p = .04$).

Study 4 aimed to provide further evidence for the proposed process that empty space prompts consumers to think of outside alternatives rather than look for more information in general. Similar to studies 2 and 3, MTurk workers were asked to imagine that they were thinking of buying a laptop computer with the option to not make a choice. They were then presented a modified screenshot of the shopping cart on Amazon displaying a matrix comparing two laptop computers. They were given four options—two being the candidate options and the other two being "I would like to get more information about these two models" and "I would like to check if there are any other options." A multinomial logistic regression showed that participants were more likely to look for other models when the space of the webpage was substantial (46.1%) than limited (35.0%; B = .698, $Wald\ Z = 5.85$, $p = .016$). No significant differences were found in terms of getting more information about the two models (29.1% vs. 27.1%; B = .491, $Wald\ Z = 2.46$, $p > .10$).

This research demonstrates in four experiments that when the empty space surrounding a choice set is substantial, consumers tend to realize the existence of other unavailable alternatives, which consequently leads them to defer their choices in various contexts. Our findings support the account based on outside alternatives over those concerning perceived attractiveness, attention allocation, time pressure, and so on. While prior research almost exclusively focuses on the space effects on evaluation, we extend investigation to consumer decision-making and identify a novel inference unique to the decision context. This research also adds to the literature on choice deferral by showing that seemingly irrelevant cues (i.e., the empty space surrounding a given choice set) affect choice deferral without eliciting negative feelings such as difficulty and disfluency. More intriguingly, these cues prompt consumers to think of options that are currently unavailable from a given choice set, thus leading them to restructure their consideration set. We hope this work invites future endeavors on better understanding how various types of incidental cues shape decision making.

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Motivated Happiness in Luxury Consumption

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EXTENDED ABSTRACT

Where luxury was limited to an exclusive group before, "affordable luxury" is now available for a large group of consumers. However, this expansion of the notion of luxury introduces a clear hierarchy within a brand. Research has shown that people are motivated to avoid being at the last place in general. This "last-place aversion" (Kuziemko et al. 2014) raises a question regarding bottom-tier luxury consumption. How can consumers who buy the lowest tier of a luxury brand nevertheless be happy with their purchase?

Drawing on literatures from assimilation and contrast (Mussweiler, Rüter, and Epstude 2004), and motivated reasoning (Ziva Kunda 1990), we suggest that consumers at different positions within a brand hierarchy relate their purchase differently to the brand. Consumers buying the lowest-tier luxury are motivated to view the brand as homogeneous, which allows them to view the product they own to represent the brand equally well as other products higher in the hierarchy. Consumers buying the top-tier luxury, in contrast, are motivated to view the brand as heterogeneous and see their product as very different from lower-tier options. In addition, these perceptions drive consumers' satisfaction with their purchase. While lower-tier consumers are happier when they see their product as similar to other options, higher-tier consumer are happier when they see their product as different from others. We test these ideas through five experiments.

In Study 1, participants imagined owning a Mercedes-Benz S-class (the top-tier), a C-class (the bottom-tier), or an A-class (lower than C-class) that would be introduced to the US market. Participants indicated how different this new A-class would be from other Mercedes cars. Participants viewed it as less different if they imagined owning a C-class than an S-class. Even though both groups made a downward comparison, the group at the lower end ended up seeing the brand as more homogeneous, as expected.

In Study 2, we again had participants imaging owning either an S- or C-class Mercedes. In addition, half of the participants were told about the introduction of a lower-tier A-class while the other half were not. For the A-class condition, participants evaluated how different the A-class car was to the other cars while for the no A-class condition, participants evaluated how different their own car was. Regardless of the introduction of A-class, participants at the bottom-tier perceived fewer differences than those at the top.

In Study 3, we tested participants' satisfaction with their own option, depending on their position in the brand hierarchy and the differences versus similarities with the overall brand they perceived. We again had participants imagining owning an S- or C-class Mercedes. We then introduced an X-class Mercedes in the middle. Participants reported their happiness with their own car and the perceived differences between their car and the newly introduced X-class. Results confirmed the expected moderation effect. For participants at the top, their happiness increased if the perceived differences increased. In contrary, for participants at the bottom, their happiness was not significantly impacted but directionally decreased if the perceived differences increased. We further showed in Study 4 that this moderated effect on happiness was mediated by the perceived representativeness of consumers' own car to the Mercedes brand.

In Study 5, we further tested about the top-bottom asymmetry in looking at the brand hierarchy and its motivational consequences on happiness. We manipulated different tiers of cars introduced in the middle, using a different luxury car brand, BMW. Participants were assigned to either afford a BMW 8-series (the top-tier) or a 2-series (the bottom-tier). They were introduced to one of three new BMW series: 2X-, X-, and 8X-series. The X-series was at the middle between the 2- and 8-series. The 2X-series looked the same as the 2 but with a slightly higher price. The 8X-series looked the same as the 8 but with a slightly lower price. The results confirmed our predictions. The different new series introduced did not impact happiness for participants at the bottom as they tended to see more similarities (fewer differences) across different tiers. However, participants at the top felt the least happy when the 8X-series was introduced but the happiest when the 2X-series was introduced. The reason was that participants at the top were more able to see differences with the other options when the newly introduced series was in the middle or close to the bottom.

Across five experiments, we demonstrate that consumers at the bottom-tier (vs. the top-tier) within a brand hierarchy are motivated to see fewer (vs. more) differences when comparing their own product (or any product) across other different tiers. As a result, for consumers at the bottom, the fewer differences (i.e. more similarities) they see, the happier they are. In contrast, for consumers at the top, the more differences they see, they happier they are. This differential effect on happiness is driving by how representative for the overall brand consumers perceive their own tier to be.

Our findings explain the success of the "affordable luxury" concept: introductions at the bottom of a brand hierarchy do not harm top-tier consumers as they view these are very different and not representative of the brand. At the same time, lower-tier consumers are not hurt because they see all options as fairly representative of the brand and new introductions do not affect that.

We contribute to the luxury branding literature by demonstrating a motivational difference between top- and bottom-tier consumers. We also contribute to the assimilation and contrast literature by showing how different positions within a hierarchy cause people to construe their views differently. We further demonstrated such motivational difference to see similarities or differences impact people's happiness. Depending on the mindset people have, people at the bottom of a hierarchy can be as happy as people at the top. However, we are cautious about generating the findings to non-luxury brand, where aspiration to be the top may be minimal. It may also not apply to the experiential products as each experience is viewed as unique and thus generates less social comparison (Gilovich, Kumar, and Jampol 2015). Future research will address these issues.

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I Think I Can… Self-Efficacy and Information Disclosure

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EXTENDED ABSTRACT

Introduction

Information is power, and investment in data-driven marketing is growing disproportionately in comparison with other marketing investment. As marketers augment capabilities for data collection, analysis and application, understanding how consumers make decisions about information disclosure is increasingly important to maximize benefits of disclosure to consumers, including relevant advertising, access to consumption opportunities and streamlined transactions, and to minimize risks to the security and privacy of consumer information.

We examine information disclosure by consumers in two frequently encountered contexts: 1) behavioral targeting of advertising based on consumer activity, and 2) online registration by consumers for access to goods and services. These contexts enable examination of the interaction between characteristics of the decision to disclose (e.g., nature of the request) and the consumer (e.g., ability to protect the privacy of personal information; trust in the data-gathering entity). In addition, the two contexts illustrate different aspects of decision difficulty that may influence consumer information disclosure, enabling a more comprehensive assessment of decision structure effects on disclosure. We also examine the influence of consumers' perceived efficacy in online environments as a moderator of the effects of decision difficulty on perceptions of trust and protection of disclosed information.

Disclosure Decisions and Self-efficacy

Extensive research in decision making has identified numerous reasons for which decisions are difficult. Amir (2004) distinguishes between difficulty due to characteristics of the choice set (e.g., number of alternatives, conflict due to tradeoffs), and difficulty due to the decision process. For the latter cause, the concept of flexibility is invoked, in which a decision maker has alternative paths to consider (Chernev 2006; Mugge et al. 2009), or the opportunity to defer all or part of a decision to a later time (Sadowski 2013; Stovall 2018).

Because a more complex display may signal higher informational value and serve as a proxy for transparency (for lower perceived efficacy consumers), we predict that consumers with lower perceived efficacy will express more trust which disclosure displays are complex, while expressed trust by consumers with higher perceived efficacy will not differ by format complexity.

In terms of heightened difficulty due to timing, as through the introduction of flexibility, consumers with lower perceived efficacy will have greater trust for the flexible option, while consumers with higher perceived efficacy will not differ by disclosure timing/flexibility.

Method

Study 1: Behavioral Targeting for Advertising: Perceived Efficacy and Decision Format

We manipulated decision difficulty through display format. One hundred and forty-five undergraduate students (M_{age} = 21.10, 58% female) participated in a 2 (format: bullet vs. paragraph) X continuous (perceived online self-efficacy) between-subjects experiment in exchange for course credit.

Subjects completed an eight-item assessment of perceived online self-efficacy (α = .946), with measures based on ease or difficulty of performing a behavior (Ajzen 2002). After a filler page, participants were given a scenario about a new ad targeting service introduced by their Internet service provider, "Connect!" The scenario described the targeting service, data tracked, and privacy terms. Information value was constant across formats presented in long paragraphs (more complex) or bullet points (less complex). After reading the scenario, participants answered questions, including the focal questions of trust toward the company (1=no trust, 7=complete trust) and belief in the company's ability to protect their privacy (1=not at all, 7=highly).

We regressed trust in the company on format (bullet = -1, paragraph = 1); self-efficacy (mean-centered); and their interaction. As predicted, the interaction was significant, b = -.23, $t(141)$ = -2.64, $p < .01$. The Johnson-Neyman technique indicated that differences in trust between the two formats were significant below self-efficacy of 3.54 (37.93% of the data). Lower self-efficacy participants trusted the paragraph format more than the bullet form, while trust did not differ by format for participants with high self-efficacy. Perceptions of the company's ability to protect participants' privacy revealed a similar pattern.

Study 2: Online Registration for Consumption: Perceived Efficacy and Decision Flexibility

In Study 2, we manipulated decision difficulty through the timing of passport information disclosure. One hundred and forty-eight undergraduate students (M_{age} = 21.37, 57% female) completed a 3 (disclosure timing: at registration vs. when needed vs. now or later) X continuous (perceived online self-efficacy) between-subjects experiment.

Participants completed the online self-efficacy measure from Study 1 (α = .928). After a filler page, they evaluated the online registration process for a home-sharing service. In the registration condition (no flexibility, immediate disclosure), participants were asked to upload their passport information. In the "when needed" condition (no flexibility, later disclosure), participants completed a destination search. After choosing a destination, they were asked to upload the passport information per local regulation of the place they chose. In the now or later (flexibility) condition, participants had the option to upload immediately, or defer. Participants then provided perceptions of trust.

We regressed trust on disclosure timing (2 dummy codes, using "at registration" as the baseline), self-efficacy, and their interaction (2 terms). The interaction term in the "now or later" condition was significant, b = -.57, $t(142)$ = -2.15, $p < .05$. The interaction term in the "when needed" condition was not significant, b = .02, $t(142)$ = .11, p =.91. For higher self-efficacy participants, decision timing did not affect trust in the service. Lower self-efficacy participants, however, exhibited higher trust when disclosure was most flexible. Spotlight analysis (following Spiller et al. 2013) results at the mean and +/- 1SD level of self-efficacy.

Discussion and Implications

Our research provides insights into factors that influence consumers' disclosure decision making. Additional research is needed to assess the relationship between trust and behavioral actions (e.g., effort invested to process disclosure displays; intention to disclose).

For instance, to what extent are consumers aware of the relationship between their self-efficacy and information vulnerability? Are consumers appropriately calibrated? If not, does making level of self-efficacy salient improve decision making? Additionally, how malleable is perceived efficacy in a particular disclosure domain? Can perceptions of efficacy be manipulated, either to improve information protective behaviors (consumer welfare) or encourage information disclosure (marketer welfare)?

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Unanticipated Emotional Benefits of Price Promotions

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EXTENDED ABSTRACT

Price promotions influence consumer evaluations, choices and behavior. There are two perspectives of the utility derived from price promotions. One is derived from neoclassical economics (e.g., Guadagni and Little 1983; Lattin and Bucklin 1989), the other from behavioral decision theory (BDT) research (e.g., Lee and Tsai 2014; Prelec and Loewenstein 1998)they often experience an immediate pain of paying, which can undermine the pleasure derived from consumption. The ticking of the taxi meter, for example, reduces one's pleasure from the ride. We propose a \"double-entry\" mental accounting theory that describes the nature of these reciprocal interactions between the pleasure of consumption and the pain of paying and draws out their implications for consumer behavior and hedonics. A central assumption of the model, which we call prospective accounting, is that consumption that has already been paid for can be enjoyed as if it were free and that the pain associated with payments made prior to consumption (but not after. Both agree that the total utility of a good is a function of its consumption utility, the price, and the transaction utility its acquisition provides. Both agree that price promotions reduce the disutility of payment, thereby increasing the total utility associated with the acquisition of goods through the corresponding increase in transaction utility that they provide. The impact of price promotions on consumption utility is where these perspectives diverge.

Classical models of consumer responses to price promotions assume that consumers have idiosyncratic tastes for goods (i.e., consumption utility) in specific contexts. They assume that consumption utility is independent of the price of the good. BDT research, by contrast, finds that payments influence the pleasure of consumption, as the "pain of paying" can negatively impact consumption utility when payments are salient (Prelec and Loewenstein 1998)they often experience an immediate pain of paying, which can undermine the pleasure derived from consumption. The ticking of the taxi meter, for example, reduces one's pleasure from the ride. We propose a \"double-entry\" mental accounting theory that describes the nature of these reciprocal interactions between the pleasure of consumption and the pain of paying and draws out their implications for consumer behavior and hedonics. A central assumption of the model, which we call prospective accounting, is that consumption that has already been paid for can be enjoyed as if it were free and that the pain associated with payments made prior to consumption (but not after. Lee and Tsai (2014), for instance, find that consumers who pay a discounted price for a product (e.g. a chocolate truffle) enjoy its consumption more than those who pay its regular price.

We propose that a rapprochement of these conflicting neoclassical and behavioral perspectives requires a theoretical integration of both views. We reconcile the conflict as reflecting assessments of utility made from different temporal perspectives (Kahneman, Wakker, and Sarin 1997): affective forecasts in which consumers evaluate consumption utility in prospect, and reports of experienced utility made by consumers during the consumption experience. In prospect, consumers adhere to the neoclassical economic perspective when forecasting the consumption utility of goods—affective forecasters overweight the intrinsic properties of the good and underweight the context of its acquisition (e.g., price promotions). In experience, by contrast, consumers adhere to the BDT view. Experiencers attend to

both the intrinsic properties of the good and its transaction utility. As a result of the different views adopted by consumers in prospect and experience, consumers commit an affective forecasting error. They underestimate the extent to which consumption utility is improved by the depth or level of price promotions on acquired goods.

Our process explanation of these effects rests on the assumption that when simulating future experiences of consumption, people tend to focus more on the desirability of the good (e.g., the valence of the stimulus), and not enough on the feasibility of its acquisition (e.g., the price paid for its acquisition; Trope and Liberman 2010). The underweighting of the context of acquisition (i.e., price promotions) due to the different construal levels of forecasters and experiencers appears to be a critical mechanism undergirding this affective forecasting bias.

STUDY 1: NATIONAL DOUGHNUT DAY

In Study 1, we tested whether consumers underestimate the extent to which price promotions influence their hedonic responses to the consumption utility of promoted goods. In a natural experiment with a mixed design, Dunkin' Donuts customers either forecasted or reported the consumption utility of one promoted and one not promoted good (a free donut and a full-priced beverage). We predicted that forecasts would be accurate for the full-priced beverage but would underestimate the consumption utility of the free donut.

Method

On National Doughnut Day in 2017, Dunkin' Donuts offered its customers a free classic donut with a purchase of any beverage at its regular price. We asked forecasters ($N = 52$) to predict the consumption utility of their donut and beverage before entering a Dunkin' Donuts (1=not at all happy; 10=extremely happy). We asked experiencers ($N = 48$) to report the consumption utility of their donut and beverage immediately upon exiting the same Dunkin' Donuts on the same scale.

Results and Discussion

Consumption utility ratings were submitted to a mixed 2×2 ANOVA with product (donut, beverage) as a within-subject factor, and role (forecaster, experiencer) as a between-subject factor. As we predicted, the analysis revealed a significant product × role interaction ($p = .036$). Affective forecasts of consumption utility for the free donut ($M = 8.05$, $SD = 1.79$) were significantly lower than the consumption utility reported by experiencers ($M = 8.87$, $SD = 1.36$; $p = .02$). By contrast, affective forecasts of consumption utility for the full price beverage ($M = 8.31$, $SD = 1.32$) were not lower or higher than the consumption utility reported by experiencers ($M = 8.33$, $SD = 2.23$; $p = .96$). There was no main effect of product or role (ps $\geq .20$).

The results provide tentative evidence for our hypotheses. Whereas forecasters accurately predicted the consumption utility of the full price beverage, they underestimated the consumption utility of the free donut.

STUDY 2: COFFEE IN THE FIELD

In a field experiment with Starbucks customers, we examined the impact of varying promotion levels on forecasted and experienced consumption utility. We predicted that the influence of price

promotion levels on consumption utility would be underestimated in prospect relative to experience.

Method

Starbucks customers ($N = 310$) were randomly assigned to one of the six conditions in a 3 (promotion level: 10%, 50%, 90% off) × 2 (role: forecaster, experiencer) between-subjects design. After indicating the beverage they were intending to purchase, participants were given a coupon and told that they could purchase the beverage at a discount: 10%, 50%, or 90% off. Forecasters, before buying the beverage, predicted the consumption utility they would derive from the beverage (1=not at all happy; 10=extremely happy). Experiencers, after buying their beverage, reported the consumption utility they derived from the beverage on the same scale.

Results and Discussion

We first regressed forecasted and experienced consumption utility ratings on three predictors: role, promotion level, and the role × promotion level interaction as independent variables. The analysis revealed the predicted significant role × promotion level interaction ($p= .03$). As predicted, price promotion levels had a different effect on consumption utility of beverages in prospect and experience. The utility reported by experiencers increased with the level of price promotion ($M_{10\%off} = 8.30$, $SD= 1.35$; $M_{50\%off} =8.80$, $SD= 1.79$; $M_{90\%off} = 9.20$, $SD= .99$; $p< .01$). However, forecasted consumption utility was insensitive to the level of price promotion ($M_{10\%off} = 8.34$, $SD= 1.16$; $M_{50\%off} = 8.39$, $SD= 1.20$; $M_{90\%off} = 8.35$, $SD= 1.29$; $p= .64$).

Before buying their beverage, Starbucks customers predicted that they would derive consumption utility to the same degree if their beverage were purchased at a discount of 10%, 50%, or 90%. After buying their beverage, by contrast, Starbucks customers reported greater consumption utility if they received a larger than a smaller discount. As a consequence of these different sensitivities, as promotion depths increased, forecasters were likely to underestimate the emotional benefits of price promotions for consumption utility.

STUDY 3: POPCORN

In Study 3, we examined the mechanism underlying the insensitivity of forecasted consumption utility to price promotions. Two possibilities are considered. First, one might suspect that the underweighting of price promotions reflects focalism (Wilson et al. 2000): forecasters focus too much on the major factor contributing consumption utility (i.e., product), and too little on the context of the acquisition (e.g., promotions). The other explanation, more consistent with our theoretical rationale, rests on the difference in construal levels between forecasters (focusing on desirability) and experiencers (focusing on feasibility). Note that while these two hypotheses lead to the same prediction regarding consumption utility, they make different predictions regarding transaction utility. If the bias is driven by focalism, then one should expect forecasters of transaction utility to focus on the price deal, thereby being more sensitive to promotion levels than experiencers. However, if the difference in construal levels underlies the bias, we would expect forecasters of transaction utility to be less sensitive to promotion levels than experiencers. Study 3 used a different measure of utility (i.e., pleasure) and experimental stimuli to examine the generalizability of our findings. Moreover, we examined the mediating role of transaction utility.

Method

425 undergraduate students first completed an unrelated survey and received $1.20 as compensation. We then randomly assigned participants to one of four conditions in a 2 (promotion level: 10¢, $1

off) × 2 (role: forecaster, experiencer) between-subjects design. Participants were presented with three popcorn (snack bag) options and asked to indicate which one they would purchase. The price of each popcorn option was $1.10. Next, participants were offered a discount at one of two promotion levels: 10¢ off, $1 off. Before buying their popcorn, forecasters predicted the consumption utility from the popcorn and the transaction utility from the price deal (1=no pleasure; 10=extreme pleasure). After buying their popcorn, experiencers reported the consumption utility and the transaction utility on the same scale, in a counterbalanced order.

Results and Discussion

Consumption utility.

A 2 × 2 between-subjects ANOVA revealed significant main effects for role ($p= .04$) and promotional level ($p= .01$). More important, there was a significant role × promotion level interaction ($p= .02$). Consistent with our previous results, forecasters predicted that they would derive similar utility from consumption, whether its price was discounted by 10¢ ($M= 5.78$, $SD = 2.31$) or $1 ($M= 5.82$, $SD= 2.45$; $p= .90$); whereas experiencers derived higher utility from consumption when the price was discounted by $1 ($M= 6.85$, $SD= 2.20$) than by 10¢ ($M= 5.71$, $SD= 2.40$; $p= 001$). When the price was discounted by 10¢, forecasted consumption utility was not significantly different from experienced consumption utility ($p = .84$). However, when the price was discounted by $1, forecasted consumption utility was significantly lower than experienced consumption utility ($p= .001$).

Transaction utility

A 2 × 2 between-subjects ANOVA revealed significant main effects of role ($p< .01$) and promotion level ($p< .001$), and a significant role × promotion level interaction ($p< .01$). Promotion levels significantly enhanced the forecasted transaction utility ($M_{10¢off}= 4.20$, $SD = 2.26$; $M_{\$1off}= 6.61$, $SD= 2.66$; $p< .001$) and the experienced transaction utility ($M_{10¢off}= 4.14$, $SD= 2.59$; $M_{\$1off} = 7.93$, $SD= 2.28$; $p< .001$). As predicted, forecasts of transaction utility were less sensitive to promotion depths than experiences of transaction utility.

Mediation analysis

Because there was no difference in the forecast of consumption utility between promotion depths, we focused on experiencers in the mediation analysis. The mediation model revealed a significant indirect effect (95%CI= [1.12, 2.38]). Price promotion levels increased experienced transaction utility ($b= 4.20$, $SE= .38$; $p< .001$), and that increased consumption utility in experience ($b= .41$, $SE= .06$; $p< .001$). More important, when we controlled for experienced transaction utility, the influence of promotion levels on experienced consumption utility became not significant ($p= .26$), suggesting a full mediation.

The results of Study 3 suggest that the earlier findings are not attributable to focalism. The underweighting of the context of acquisition due to the different construal levels of forecasters (focusing on desirability) and experiencers (focusing on feasibility) appears to be a critical mechanism undergirding this affective forecasting bias.

STUDIES 4A–4C: TRANSACTION FOCUS

In Studies 4A–4C, we modulated the salience of the transaction to which forecasters attend. We expected that forecasters of consumption utility would be sensitive to promotion levels when their attention was diverted toward those features of the transaction. Whereas Studies 4 shared a common design, we used different product categories and measures of utility (i.e., happiness, pleasure, and enjoyment, respectively) to further test the generalizability of our results.

Method

Studies 4A-C shared a common design: we randomly assigned participants to one of four conditions in a 2 (promotion level: 10%, 90% off) × 2 (attentional focus: control, transaction) between-subjects design. In Study 4A (*N*= 174), participants first indicated one beverage that they wanted to order at Starbucks. In Study 4B (*N*= 204) and 4C (*N*= 400), participants indicated one movie that they wanted to see at a local cinema. They then imagined that the beverage (or movie ticket) was offered at 10% or 90% off its regular price. Controls forecasted the consumption and transaction utility of the good on a 10-point scale. In the transaction focus condition, participants were prompted to consider features of the transaction (i.e., to think of the regular and discounted price). They then forecasted the consumption and transaction utility of the good on the same scale, as did controls.

Results and Discussion

We observed consistent pattern of results across three studies. We report the results of Study 4A below.

Consumption utility

A 2 × 2 between-subjects ANOVA revealed a significant main effect of promotion level ($p < .001$) and a significant interaction between promotion level and attentional focus ($p = .001$). There was no significant main effect of attentional focus ($p= .50$). In the control condition, participants predicted that they would derive similar consumption utility from their beverage, whether its price was discounted by 10% (*M*= 7.92, *SD*=1.48) or 90% (*M*= 8.06, *SD* = 1.85; $p = .70$). In the transaction focus condition, by contrast, participants predicted that they would derive greater consumption utility from their beverage when the price was discounted by 90% (*M* = 9.08, *SD* = 1.20) than by 10% (*M*= 7.25, *SD*= 1.93; $p< .001$).

Transaction utility

A 2 × 2 between-subjects ANOVA revealed a significant main effect of promotion level ($p < .001$) and a significant interaction between promotion depth and attentional focus ($p = .01$). There was no significant main effect of attentional focus ($p= .54$). Participants predicted that they would derive greater transaction utility from the deal when its price was discounted by 90% than by 10% in the control condition ($M_{10\%off}$ = 7.56, *SD*= 1.88; $M_{90\%off}$ = 8.92, *SD*= 1.54; p= .001) and the transaction focus condition ($M_{10\%off}$ = 6.65, *SD*= 2.57; $M_{90\%off}$ = 9.49, *SD*= 1.07; $p<$ .001). The difference in forecasts of transaction utility between the two promotions was larger in the transaction focus condition than the control condition.

Mediation analysis

Focusing on the transaction focus condition, we tested whether the observed effect of promotion level on forecasted consumption utility was mediated by forecasted transaction utility. Results revealed a significant indirect effect (95% CI= [.01, .03]). Promotion levels increased forecasted transaction utility (*b*= .04, *SE* = .01; *p*< .001), and that increased forecasted consumption utility (*b*= .52, *SE*= .08; *p*< .001). Importantly, after controlling for forecasted transaction utility, the impact of promotion level on forecasted consumption utility became not significant (*p*= .30), suggesting a full mediation.

Conclusion

Our findings reconcile conflicting neoclassical and behavioral perspectives on the impact of price promotions on consumption utility. We find that consumers underestimate the emotional benefits of price promotions because they adopt each view at different points in time. In other words, discounts do improve the consumption experience, but that improvement is unanticipated. Moreover, the underweighting of the emotional responses to transaction utility appears to be that critical mechanism undergirding the error in the forecast of consumption utility.

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Greater Constraints Lead to a Purchase Decision:
The Impact of Power Distance Belief on Purchase Deferral Tendency

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EXTENDED ABSTRACT

The present research explores how power distance belief (PDB) – the extent to which people accept and endorse hierarchy (Zhang et al. 2010) – influences consumers' purchase deferral tendency. We demonstrated that consumers high (vs. low) in power distance belief are less likely to defer purchases because they perceive greater constraints on their behavior, which increases their purchase urgency and reduces their purchase deferral tendency.

High (vs. low) PDB cultures are characterized by a preference for a 'defined' place for everyone within the social order. Further, people in high (vs. low) PDB cultures also tend to be inflexible, hold firm beliefs, act in a scripted fashion, and do not deviate from norms (Carl et al. 2004; Hofstede 2001). We propose that the rigidity and inflexibility of high (vs. low) PDB cultures as well as the limited opportunities for individuals in such cultures to move around – both in thought and deed – and scarce resources increase the constraints perceived by individuals on their behavior in general, and induce a "constraints mindset." For example, in ancient and medieval India (a high PDB culture), people belonging to the different castes used to have fixed and set roles like carpenter, plumber, cleaner, and children were expected to follow the same profession as their parents. Importantly, individuals were not expected to deviate from those roles, imposing constraints on the role on each person (Blunt 2010).

We posit that consumers high (vs. low) in PDB are less likely to defer purchases because they perceive greater constraints and purchase urgency (i.e., a serial mediation hypothesis). Specifically, we propose that the constraints perceived by individuals leads to a constraints mindset, which in turn triggers the desire to have more products as a compensatory mechanism, leading to a greater purchase urgency and the tendency to make (rather than defer) a purchase. That is, a constraints mindset spills over to product availability, and increases purchase urgency (Ge, Messinger, and Li 2009; Gupta and Gentry 2016). Formally,

Hypothesis 1   *High (vs. low) PDB individuals are less likely to defer purchases.*

Hypothesis 2   *The relationship between PDB and purchase deferral is mediated by perceived constraints and purchase urgency.*

Boundary Conditions

We examined the role of social density – the number of people in a given space. We propose that people are more uncomfortable in high social density situations because of lesser control over one's movements and a higher likelihood of being pushed and jostled by others (Dion 2004; Hui and Bateson 1991). This situation, in turn, should increase individuals in high social density situations to perceive greater constraints on their movement and behavior. Hence, we suggest that a high (vs. low) social density should increase the perceived constraints (and, consequently, lower the purchase deferral tendency) among low (but not high) PDB individuals, whose baseline level of perceived constraints is low.

Hypothesis 3   *Social density reduces low (but not high) PDB individuals' tendency to defer purchases.*

In study 1, PDB was measured by using Yoo, Donthu, and Lenartowicz (2011)'s scale (α = .96). Participants were asked to rent a movie that they would be interested in renting from a purportedly real website called "AllFunStuffHere.com" which sells and leases movies, songs, albums, etc. via instant downloading. Each participant was asked to indicate whether they would rent the movie (coded 0) or prefer to defer purchase (coded 1). Higher scores indicate greater tendency to defer purchases. A logistic regression with a movie rented (or deferred) as the dependent measure (dummy-coded: 0 = Rented, 1 = Deferred) and PDB as an independent variable revealed a significant negative effect of PDB ($\beta(1)$ = -.37, $Exp(\beta)$ = .69, Wald = 9.43, $p < .005$), supporting H1.

Study 2: PDB was measured with a 3-item, 7-point scale (α = .97) developed and validated by Zhang et al. (2010). Following the procedure outlined by Dhar (1996; 1997), participants were asked to assume that they were shopping for three products (gloves, wallet, and watch) for themselves and that they had narrowed their choice to two options for each product. They were further told that in this task, they will choose between the two options for each product, though they could also skip both options and continue to look for others. Their responses were coded 0 (if they chose either option) or 1 (if they did not choose either option and preferred to continue looking). We also measured participants' perceived constraints via a 4-item, 7-point scale (α = .95) developed by the authors and purchase urgency with a 4-item, 7-point scale (α = .62) adapted from Ge et al. (2009). A bootstrapping procedure with 10,000 iterations (Model 6, Hayes 2012) revealed that the indirect effect of perceived constraints (mediator 1) and purchase urgency (mediator 2) on the link between PDB and purchase deferral tendency was significant (β = -.01, SE = .00, CI_{95} = -.0233, -.0028), supporting the serial mediation model and H2.

Study 3: PDB was manipulated using Zhang et al. (2010)'s procedure. Thereafter, participants were randomly assigned to the high social density (N = 66) or to the control condition (N = 83). As in study 1, we informed participants that a purportedly new and real website called "AllFunStuffHere.com" has commissioned us to conduct a survey to gauge customer responses prior to its launch. In order to make the purchase task more realistic and relevant, we provided participants with a list of book genres they may be considering purchasing at that point in time (1. Biographies 2. Business 3. Fiction. 4. Diet, Health, & Fitness 5. Self-help & Relationships). Next, we provided participants with two different books in the genre they picked, and also gave them the option to defer purchase. Their responses were coded 0 (if they chose to purchase either option) or 1 (if they did not purchase either option). We found a significant interaction between PDB and social density ($\beta(1)$ = 1.98, $Exp(\beta)$ = 7.26, Wald = 4.77, $p < .03$) and only in the low PDB condition, a logistic regression revealed a significant negative effect of social density ($\beta(1)$ = -1.28, $Exp(\beta)$ = .28, Wald = 3.75, $p = .05$), suggesting that low (but not) PDB individuals are less likely to defer purchases when social density is high (vs. control) as predicted. These results supported H3.

Taken together, these findings supported our prediction that consumers high (vs. low) in power distance belief are less likely to defer purchases because they perceive greater constraints on their

behavior, which increases their purchase urgency and reduces their purchase deferral tendency.

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When Self-Perceived Efforts Lead to Perseverance:
Implications for the Development of Pro-Environmental Behaviors

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EXTENDED ABSTRACT

Many governments and non-governmental organizations are developing strategies encouraging individuals to take simple actions in favor of the environment: recycle, drink tap water, turn off lights, take slightly shorter showers, print on both sides, etc. However, we provide evidence suggesting that behaviors that are perceived as effortful are more conducive to subsequent behavior change than simple, effortless behaviors. Actions that are perceived as effortful reinforce pro-environmental self-identity and in turn pro-environmental behavior (PEB).

Existing empirical evidence suggests that effort spent on the process is related to more appreciation of the outcome (e.g. Norton, Mochon, & Ariely, 2012). Also, financial effort on an initial prosocial behavior, even accidental, increases the probability of subsequent pro-social behaviors (Gneezy, 2012). Observed effects could be explained by the self-signaling utility of effort. Self-signaling theory (Bénabou & Tirole, 2011; Bodner & Prelec, 2003) posits that individuals may choose to adopt certain behaviors for the diagnostic utility of these behaviors, i.e. what they reveal about themselves. Many studies have shown that our behaviors can serve not only as an identity revealer but also as a determinant by influencing our attitudes and our perception of ourselves (e.g. Bem, 1972; Carney, Cuddy, & Yap, 2010). In this research, we hypothesize that the more effortful a first PEB is the more it will increase individual's environmental self-identity – the extent to which a person sees herself as someone whose behaviors are environmentally friendly (Van der Werff, 2014) – and subsequent PEB.

Three studies quantify the relationship between perceived effort of PEBs, environmental self-identify, and subsequent PEBs. Study one tests whether perceived past effort affects subsequent PEB. One hundred ninety-three participants, which approximated the Swiss population on demographic variables, were randomly assigned to one of three experimental conditions. In the effortful (effortless) condition, participants were asked to recall episodes where they felt they did something effortful (effortless) to reduce their energy consumption and then to describe one of these episodes and why it was effortful (effortless). Control participants were asked to recall things they did during the previous week and to describe one of these episodes. We measured subsequent PEB by offering participants the opportunity to donate (part of) their compensation to an environmental nonprofit. Participants in the effortful versus effortless condition ($M = 2.76$ vs $M = 1.64$, $p = .041$) and versus control condition ($M = 1.51$, $p = .016$) gave significantly more. This result supports our prediction that higher perceived efforts associated with a past PEB increases the probability of future PEB.

The aim of study two is mainly to show the mediational effect of environmental self-identity. One hundred sixty three MTurk participants were randomly assigned to complete one of the three episodic recall tasks as in study one. Then, we measured environmental self-identity (Van der Werff, 2014). To establish external validity, we measured subsequent PEB by asking participants to volunteer their time (0 to 5 minutes) by answering a survey measuring their energy footprint (vs. money donation in study one). Participants in the effortful condition saw themselves as more pro-environmental than those in the control condition ($M = 4.00$ vs $M = 3.61$, $p = .049$), but

it was not the case for those in the effortless condition ($M = 3.89$, $p = 1.00$). Environmental self-identity fully mediated time volunteered. More specifically, participants in the effortful condition saw themselves as significantly more pro-environmental than those in the effortless and control conditions ($\beta = .20$, se = .080, $t = 2.44$, $p = .016$) and the more they saw themselves as pro-environmental the more they donated time to the energy footprint calculator ($\beta = .54$, se = .18, $t = 3.07$, $p = .002$). The indirect effect was positive and significant ($a \times b = .10$, 95% CI [.02 to .27]). These results support our hypothesis that more effortful past PEB increases perceived pro-environmental self-identity, leading to more subsequent PEB.

The first objective of study three is to show that we can manipulate the subjective perceived effort associated to a given behavior and obtain a similar effect on subsequent behaviors as in study one and two. In addition, the second objective of this study is to demonstrate that environmental self-identity is also influenced by subsequent behavior, which triggers a virtuous cycle. One hundred eighty-two Mturk participants filled our survey and ran "the chance to win a $20 bonus while improving our living environment". Participants were informed that the computer randomly selected for them either an effortful or an effortless task. In both conditions, they were asked to find one to five innovative ideas to protect the planet from climate change. Then, to measure subsequent PEB, we asked them, in case they were one of the five $20 bonus winners, if they wanted to donate (part of) their bonus to the World Wildlife Fund. We measured the degree of perceived effort associated with the task as manipulation check and their environmental self-identity. Results show that participants in the effortful (vs. effortless) condition perceived the task as significantly more effortful ($M = 5.00$ vs $M = 4.17$, $p = .001$). Participants in the effortful (vs effortless) condition donated significantly more of their potential bonus ($M = 5.14$ vs $M = 3.57$, $p = .049$). Also, the level of donation mediated the effect of the manipulation on self-environmental identity. The more participants donated the more they saw themselves as pro-environmental ($\beta = .07$, se = .17, $t = 4.12$, $p = .000$). The indirect effect was positive and significant ($a \times b = .11$, 95% CI [.00 to .23]). Whereas study two showed that the effort associated with a past PEB affects environmental self-identity, which in turn influences subsequent behavior, study three shows that the subsequent PEB also influences environmental self-identity.

The purpose of this research is to inform public policies and environmental organizations by highlighting that simple actions (e.g. resulting from nudges) may have limited transformative effect compared to strategies that encourage environmental efforts, which affect people's environmental self-identity.

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How Quantitative Goals are Organized

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EXTENDED ABSTRACT

Goals are one of the most ubiquitous drivers of behavior: a consumer decides to burn 200 calories per day, a runner pursues a goal of running 15 km per week, and an employee may work on a project for 12 hours per month. Because goals have such a central place in people's lives, it is not surprising that much research has been dedicated to understanding the mechanics of goal pursuit (Heath, Larrick, and Wu 1999; Kruglanski et al. 2002). While there is a wealth of such research, less is known about how individuals organize their goal pursuit in the first place. For example, to pursue a goal of running 15 kilometers per week, a person can decide to complete this running goal in one stretch or restructure it into more or less (smaller) sub-goals (e.g., one 5-km run and one 10-km run or three 5-km runs).

Understanding the factors that determine the choice of a particular goal pursuit structure is crucial because whether goals are pursued through no, few or many sub-goals has important implications for motivation, persistence and goal completion (e.g., Amir and Ariely 2008; Huang, Jin, and Zhang 2017). For example, breaking up a superordinate goal into smaller sub-goals can lead to greater commitment and motivation by helping signify progress toward the ultimate end goal. In addition, smaller sub-goals are easier to accomplish than the overall goal, thereby enhancing a goal's perceived attainability (e.g., Fishbach, Dhar, and Zhang 2006)keeping in shape. In other situations, however, having more sub-goals may interfere with the progression toward the attainment of the overall goal because it may breed a sense of self-congratulation and encourage relaxation (e.g., Amir and Ariely 2008).

The main focus of this manuscript is to better understand the antecedents of people's goal pursuit organization (post-decision but pre-action; Heckhausen and Gollwitzer 1987). In doing so, we focus on quantitative goals, which are goals that are specified with a number symbol expressed on a measurement unit. Despite their ubiquity, quantitative goals have received very little attention in the literature.

In general, how do people decide to pursue a goal through no, few or many sub-goals? Intuitively, a likely consideration pertains to the goal level (i.e. perceived distance to goal completion): relative to a lower one (e.g., 2-hour task), a higher goal level (e.g., 5-hour task) may strengthen the motivation to make the goal pursuit easier by partitioning the goal in more sub-goals. Aside from these motivational factors, we propose that, in the case of quantitative goals, people's numerical cognition may also affect goal pursuit organization: goals specified in smaller numbers (i.e. in larger units) lead to goal pursuit structures with less sub-goals than larger numbers (i.e. in smaller units).

At first blush, this prediction may also result from an account based on distorted goal level perceptions: a 120-minute task may be perceived to take longer than a 2-hour one (between-subjects), such that the former leads to a stronger motivation to make the goal pursuit easier by partitioning the goal in more sub-goals. Although people indeed seem to overly rely on number magnitude in numerical judgments in some contexts (e.g., perceiving the difference between "7/10 vs. 9/10" as larger than "700/1000 vs. 900/1000"; Pandelaere, Briers, and Lembregts 2011), we propose that it is less likely to emerge in the context of goal pursuit organization – evaluating one piece of quantitative information specified in a familiar or well-calibrated unit in isolation (e.g., a 2-hour task). That is, recent work suggests that the overreliance on number magnitude as a cue for quantity judgments seems less likely when numerical values are processed sequentially or separately (Schley, Lembregts, and Peters 2017), when unit size is unambiguous (Bagchi and Li 2011)"$6 off when you accumulate 1,000 [100] points. Earn 10 [1] points/dollar", when units are well-calibrated (Shen and Urminsky 2013). Indeed, in a series of pilot studies investigating all the stimuli used in this manuscript (not reported due to space constraints, but see study 4b), we only find limited support for differences in goal level perceptions (and corresponding differences in motivation) as a function of number magnitude. Instead, we suggest that number magnitude and units may affect goal pursuit through a different route.

The decision process of dividing a quantitative goal in a number of smaller sub-goals is likely to not only involve goal level considerations and/or other motivational factors. We propose that it also involves thinking about dividing a number, namely the quantitative goal (e.g., 2-hour task), into a number of smaller parts (e.g., 5 sub-goals). To be clear, from a mathematical point of view, all numbers (and quantitative goals) can be divided in an infinite set of smaller numbers: for example, both 120 and 2 can be divided in 5 parts (120: $20 – 20 – 70 – 5 – 5$; 2: $5*.4$) if one desires. So why would people perceive less opportunity to divide a smaller number? One reason may be that, in their daily lives, people seem to have a default tendency to approach numerical information in terms of "natural numbers" avoiding the use of decimals, even to such an extent that people inappropriately apply natural number rules to situations that require other types of mathematical reasoning (e.g., Ni and Zhou 2005).

If one primarily thinks in terms of natural numbers, a smaller number (e.g., 2) is naturally perceived to offer less opportunity to be divided in many smaller parts than a larger number (e.g., 120): 2 may be more likely to be thought of as a combination of 2 parts (e.g., $1 + 1$), but less likely as a combination of 5 parts (e.g., $0.25 + 0.25 + 1 + 0.25 + 0.25$), since the second combination involves the use of rational numbers. In contrast, even if one considers only natural numbers, 120 can be still quite easily thought of a combination as of 2 parts (e.g., $60 + 60$) as well as 5 parts (e.g., $5 + 5 + 100 + 5 + 5$). Given that information and procedures that are easy to access mentally also have a strong impact on judgments (Wyer 2011), we predict that this difference in perceived opportunity to be divided in smaller parts may distort the organization of quantitative goals, and render it susceptible to unit effects: because (on average) smaller numbers are perceived to provide less opportunity to be divided in many smaller parts, the likelihood that one thinks of dividing a goal specified in smaller numbers (e.g., 2-hour task) in many smaller parts is lower compared to larger numbers (e.g., 120-minute task). We test this hypothesis, the proposed mechanism, and its downstream effects on goal motivation in six studies. Due to space constraints, we only report five studies (s1 – s4a/b).

In study 1 (N = 215, after exclusions), we aim to find support for the contention that relative to units associated with smaller numbers, units associated with larger numbers lead to goal pursuit structures with more sub-goals across a wide array of domains and types of numbers. This study had a mixed experimental design, with unit – number magnitude (2) as the between-subjects factor and scenario (7) as the within-subjects factor. The scenarios involved running (10 km vs. 10,000 meters), working on an assignment (8 hours vs. 480 minutes), limiting television watching (2 hours vs. 120 minutes), teaching (3 hours vs. 180 minutes a week), burning calories (2 ki-

localories vs. 2000 calories), carrying stuff to your cellar (12 kilogram vs. 12,000 gram), and volunteering for a charity (6 hours vs. 360 minutes). Participants indicated their preferred goal structure to complete these goals ("How would you complete this goal? 1 = at one time point – 7 = split it up into seven time points"). A multilevel Poisson regression with unit as the between-subjects factor and scenario as the within-subjects factor shows that across all scenarios, specifying quantitative goals in larger numbers leads to choosing goal structures with more sub-goals (β = .16, Wald χ^2(N = 215) = 21.74, p < .001).

Study 2 (N = 265, after exclusions) tests the effect in the context of actual goal pursuit. Participants were presented with a goal to burn energy by mouse clicking, and they were told that they would decide how to complete it. Burning energy through mouse clicking was specified in novel and artificial units: RD in the large numbers conditions and kiloRD in the small numbers conditions. In addition, since they would actually complete their burning energy goal, they were told that they would rate some pictures while not performing it. In addition, if the unit effect on goal organization (as we predict) is not due to differences in goal level perceptions, providing a stronger alternative cue for goal level (i.e., what other relevant people say about a goal level) will not attenuate it. In the conditions with no alternative cue for goal level, participants immediately proceeded to organize their goal pursuit. In the condition with an alternative cue for goal attainability, participants read the following statement before they saw the number of [kilo]RD: "*Please be aware that the required number of [kilo]RD may seem very large, but it is not! This is the reaction that we often got from earlier participants. They confirmed that it is not much work*". After reading the information about the required number of [kilo]RD to burn, they were told that they could choose how to complete their burning goal and the picture rating (e.g., first evaluate all the photos, then complete their burning goal; split the picture rating and their burning goal into several time points). They first indicated their preferred goal pursuit structure in open-ended boxes and then completed the clicking and photo rating task (organized as requested). We replicated the unit effect (Wald χ^2**(N = 265) = 87.28**, p < .001). There was a main effect of goal cue (Wald χ^2(N = 265) = 15.37, p < .001), and, unexpectedly, a significant interaction term (Wald χ^2(N = 265) = 3.15, p = .08), meaning that the effect did not attenuate, but rather increased. Since participants actually performed the goal of "clicking", we also found that merely specifying a goal in larger numbers led to more clicking than a goal in smaller numbers (β = .07, Wald χ^2(N = 265) = 48.38, p < .001), which may suggest that participants became more motivated by using a goal system containing more sub-goals.

In study 3 (N = 408), we aim to find that increasing the perceived opportunity to divide the smaller number conditions would attenuate the effect. Specifically, we included two conditions that encouraged participants to think in terms of rational numbers. To do so, we add a decimal separator and two decimal digits in the two "higher-opportunity-to-divide" conditions: for example, instead of presenting the number 5, we use 5.00. This experiment had a 2 (unit: small vs. large) x 2 (decimals: absent vs. present) between-subjects design. We find a significant interaction (Wald χ^2(N = 408) = 5.72, p = .02). In the two conditions in which decimals were not salient, we again found that people divided a goal in less parts when the information was specified in smaller numbers rather than larger ones (β = .23, Wald χ^2(N = 408) = 12.75, p < .001). However, in line with our expectations, when decimal digits were salient, this difference was attenuated (β = .02, Wald χ^2(N = 408) = .06, p = .81).

Study 4a-b (N = 200 and N = 187, after exclusions) are two incentive-compatible studies in which we identify two relevant consequences of having a quantitative goal specified in smaller vs. larger numbers. In both studies, we asked participants for advice in how to complete a goal (4a: reducing social media use; 4b: limiting alcohol consumption). From a consumer welfare position, it is generally better to limit social media use to as few sessions as possible (per day), to limit the negative effects of multi-tasking (e.g., Parry and le Roux 2019)social, and work environments, research has indicated that media multitasking (i.e., engaging in more than one media or non-media activity simultaneously. Conversely, for a given quantity of beer per month, it is better to spread consumption over more days rather than binge drinking on only a few days (e.g., Britton et al. 2018). Participants were randomly assigned to one of the two unit conditions (4a: "wasting 1 hour [60 minutes] per day on social media"; 4b: "drinking 11 liters [372 fluid ounces] of beer in the month of March"). We told them that the experimenters would randomly test a couple of the advices given, and the most-liked ones would get a bonus payment. In study 4a, we find that specifying a goal to limit social media in *smaller* numbers leads to more optimal advices (i.e. in *less* parts) (β = .79, Wald χ^2(N = 200) = 226.81, p < .001). Conversely, study 4b shows that a goal to limit monthly alcohol consumption is more likely to be advised in a less unhealthy way (i.e *more* spread out) when specified in *larger* numbers (β = .36, Wald χ^2(N = 187) = 94.46, p < .001). In study 4b, participants also completed a measure that assessed the extent to which they tried to make goal pursuit easier (added as final question). Consistent with the pilot studies, specifying a goal in liters or fluid ounces did not affect the motivation to make a goal easier (t(185) = -.65, p = .51). When adding this variable (mean-centered) to the Poisson regression with unit type as predictor and number of (sub-)goals as dependent variable, we found no interaction between unit type and motivation (p = .82), but we did see that the effect of unit type remained significant (β = .34, Wald χ^2(N = 187) = 85.30, p < .001), and that motivation had an independent effect on goal pursuit organization (β = .13, Wald χ^2(N = 187) = 53.42, p < .001). A stronger motivation to make a goal easier to pursue did lead to a goal structure with more sub-goals, but this motivation was independent from the effect of unit type on goal pursuit organization.

Theoretically, this manuscript is one of the first to provide insight in the organization of goals, and finds that for quantitative goals, aside from motivational factors, the numerical value/unit in which a goal happens to be specified may have implications for goal pursuit organization. In addition, we add to the literature on numerical judgments by introducing the notion of a number's perceived opportunity to be divided in multiple parts, and how this perception can affect important distribution decisions. Practically, this work presents an easy-to-implement nudge (Thaler and Sunstein 2008) for managers or public policy makers who want to encourage individuals to use a particular goal pursuit structure, thereby potentially leading to stronger motivation or better goal performance.

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The Influence of Idealistic Versus Pragmatic Mindsets on Charitable Behavior

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EXTENDED ABSTRACT

The scale of charitable donation in the US reached a record figure of more than $390 billion in 2016. Even though the performance of charitable donation in the US is impressive, the global situation is worrying: individuals' giving tendency is down across globe that the donation percentage in 2016 is the lowest seen for three years. Further analysis reveals that there has been a significant difference in the level of charitable giving across different individuals and countries. For example, around 60% of individuals in the US donate money, whereas only 8% individuals in China do so (Charities Aid Foundation 2017). Thus, it's crucial to understand the individual difference and national difference on motivations of engaging in charitable giving, or more importantly not engaging in charitable giving.

Prior research on how cultural values influence peoples' charitable behavior is very limited. The only exception is that Winterich and Zhang (2014) found that high power distance leads to weaker perceptions of responsibility to help others and thus decreases monetary donation. However, power distance can only predict monetary donation, but not other charitable behaviors (see Study 1, Winterich and Zhang 2014). The current research adds to this stream of literature by moving beyond existing cultural dimensions identified by Hofstede many decades ago (Hofstede 1984) to systematically consider how cultural differences in mindset may influence consumers' charitable behavior and the effectiveness of different types of charitable appeals. Specifically, we investigate how the salience of idealistic (vs. pragmatic) mindset differs across culture and individuals impact individuals' willingness to engage in charitable behavior across a myriad of charitable contexts.

Drawing from past research (Kivetz and Tyler 2007), we define idealistic mindset as being placing values and principles above practical concerns and expressing one's real self, whereas pragmatic mindset as a being action-oriented and primarily guided by practical consideration. We propose that consumers with an idealistic mindset, as compared to those with a pragmatic mindset, are more likely to engage in charitable behavior as they are more intrinsically motivated and less extrinsically motivated in their charitable decision making. Drawing on this theorization, we also predict that extrinsically focused messages in charity appeals which emphasize the external benefits of charitable giving increase charitable behavior among pragmatic consumers as they are extrinsically motivated, but not among idealistic consumers as external benefits are inconsistent with their intrinsic motivation. In contrast, intrinsically focused messages which emphasize the internal meaning of charitable giving increase charitable behavior among idealistic consumers, but not among pragmatic consumers.

THEORETICAL BACKGROUND

Despite the ubiquity of the tension between idealism and pragmatism and its influence on people's behavior, there has been very limited research in this area. Only a handful of psychological research has been published in this area (e.g., Kivetz and Tyler 2007; Danziger et al. 2012; Burger and Bless 2016). For instance, Kivetz and Tyler (2007) show that a distal time perspective activates an idealistic (vs. pragmatic) self and this, in turn, leads to a focus on maximizing benefits relevant to the activated self. However, idealism versus pragmatism is always treated as a dependent variable of

interest in past research. The impact of idealism versus pragmatism on individuals' behavior is little understood. In this research, we examine how idealistic (vs. pragmatic) mindset influence consumers' charitable behavior.

Consumers' charitable behavior can be driven by either intrinsic or extrinsic motivations (Bénabou and Tirole 2006; Ryan and Deci 2000; Johnson and Grimm 2010). Intrinsic motivations to engage in charitable behavior is more associated with "warm glow," the positive feelings associated with helping others (Andreoni 1989; Ryan and Deci 2000) and interest (Renninger 2000). In this case, consumers derive satisfaction from the action itself and the knowledge that the donation has helped to support others (Johnson and Grimm 2010). In contrast, extrinsic motivations are mostly closely associated with extrinsic reward (Johnson and Grimm 2010; Sansone and Harackiewicz 2000). In these cases, the donation behavior is a means to gain an external benefit or reward.

In this research, we propose that idealistic consumers are more intrinsically motivated in charitable behaviors. Instead of focusing on achieving any extrinsic specific goal, idealistic consumers focus on what they would like to do than what they can do. Their actions are more driven by internal personal values, principle, and interests. They tend to define, express, and enhance their sense of true self (Trzebinski 1989; Kivetz and Tyler 2007). Moreover, idealistic consumers are willing to forgo valuable extrinsic resources like money in the cause of more symbolic identity-related rewards (e.g., principles; self-conception; respect) (e.g., Schlenker and Weigold 1989; Kivetz and Tyler 2007). In contrast, pragmatic consumers are bogged down by practical considerations. They are "realistic and practical," and their actions are more driven by the extrinsic reward or achievement (Burger and Bless 2016; Kivetz and Tyler 2007). Moreover, pragmatic consumers focus more on the instrumental benefits and extrinsic inducement even at the cost of more intrinsic values and principles (Deci and Ryan 2010; Danziger et al. 2012). Therefore, pragmatic consumers are more extrinsically motivated and less intrinsically motivated.

As intrinsic motivations are stronger predictors of charitable behavior as compared with extrinsic motivations (Grant 2008). Drawing upon these arguments, we propose that idealistic consumers, who are intrinsically motivated to improve the society to a better place (Reiss 2004), are more likely to engage in charitable behavior; whereas pragmatic consumers, who are more extrinsic motivated by extrinsic rewards, are less likely to engage in the charitable behavior, hypothesized as follows:

Hypothesis 1   *Consumers with an idealistic (vs. pragmatic) mindset have higher (vs. lower) tendency to engage in the charitable behavior.*

Hypothesis 2   *The relationship between consumers' idealistic (vs. pragmatic) mindset and charitable intention is mediated by intrinsic versus extrinsic motivation.*

Consistent with the mediation role of intrinsic (vs. extrinsic) motivation, we further propose that different message framings in charity appeals will influence consumers with different mindsets oppositely. Specifically, extrinsically focused messages will increase

pragmatic consumers' likelihood to engage in charitable behavior as they are extrinsically motivated and treat their actions as a mean to gain benefits or rewards that are external to their behavior (Sansone and Harackiewicz 2000). The external benefits match with pragmatic consumers' extrinsic motivation and will trigger higher likelihood to engage in the charitable behavior. On the contrary, we predict that extrinsically focused messages don't increase charitable motivation among idealistic consumers. Prior research has shown that individuals' intrinsic motivation to participate in the activity could be undermined by attracting them to participate in that activity as a means to gain extrinsic benefits and rewards (Deci and Ryan 2010; Lepper 1981). As intrinsically motivated consumers gain satisfaction directly from this behavior intrinsically (Ryan and Deci 2000), extrinsically focused messages are inconsistent with idealistic consumers' intrinsic motivation, thus won't increase their charitable motivation.

In the same vein, we argue that intrinsically focused messages in charity appeals are inconsistent with pragmatic consumers' extrinsic motivation because their actions are more driven by the extrinsic reward or achievement instead of intrinsic meanings. Therefore, the intrinsically focused message won't increase pragmatic consumers' charitable intention. In contrast, as intrinsically focused messages are consistent with idealistic consumers' intrinsic motivation, so intrinsically focused messages are likely to increase their charitable behavior. Taking these together, we propose:

Hypothesis 3a   *Extrinsically focused messages increase charitable behavior among pragmatic consumers, but not among idealistic consumers.*

Hypothesis 3b   *Intrinsically focused messages increase charitable behavior among idealistic consumers, but not among pragmatic consumers.*

Study 1

Study 1 tested Hypothesis 1 in a field setting. During a local Red Cross's blood donation drive, we randomly approached 156 students (48.1% women, average age = 22.84). We showed participants the poster of blood donation drive and asked them whether they are willing to participate in blood donation or not. Subsequently, participants completed the 10-item pragmatic-idealistic mindset scale (working paper; see Appendix)[1].

As expected, the more people endorsed an idealistic (vs. pragmatic) mindset, the more they chose to participate in the blood donation ($B = 3.44$, $SE = 1.77$, $Wald = 3.79$, $p = .05$).

Study 2

Study 2 replicated the results of study 1 at the national-level. A total of 185 participants (76 Chinese [57.9% women, average age = 33.11] from Sojump, 78 US [53.8% women, average age = 39.67] from M-Turk) completed the study. First, participants completed the 10-item idealistic-pragmatic mindset scale used in Study 1. Second, to control for power distance belief that may affect charitable behavior (Winterich and Zhang 2014), we measured participants' power distance (Yoo, Donthu, and Lenartowicz 2011). Finally, we asked participants to imagine that they had $100 (for US participants; RMB 600 for Chinese participants) and indicate how much they would donate to local charities (Winterich and Zhang 2014).

In line with prior research (e.g. Hofstede 1984), we found that US participants indicated lower power distance belief than Chinese participants. Importantly, we also found that US participants are more idealistic and less pragmatic than Chinese participants. Ad-

ditionally, US participants donated more than Chinese participants, supporting our prediction.

Study 3

Study 3 provided experimental evidence for the idea that compared to those with a pragmatic mindset, people with an idealistic mindset are more likely to engage in the charitable behavior. 266 undergraduate students (57.1% women, average age = 21.18) participated in the study. To manipulate participants' idealistic (vs. pragmatic) mindset, we adopted the "news article" methodology that has been widely used to manipulate people's mindsets (e.g., Chiu et al. 1997). Then, we asked participants to recall two situations in which they acted idealistically (vs. pragmatically), and they felt it was the appropriate thing to do. After that, participants were presented with a flyer describing volunteer recruitment. Following the scenario, we measured participants' volunteer intention (1 = *not at all willing*; 10 = *extremely willing*). Last, we applied ten items measuring participants' intrinsic motivation (e.g. "I feel it is important to help others.") and extrinsic motivation (e.g. "Volunteering experience will look good on my resume") (Clary et al. 1998).

Results indicated that participants in the idealistic mindset condition were more likely to volunteer (*Midealistic* = 5.86 vs. *Mpragmatic* = 4.68; $F(1, 258) = 17.86$, $p < .001$, $d = .52$), more intrinsically motivated (*Midealistic* = 3.74 vs. *Mpragmatic* = 3.52; $F(1, 258) = 4.45$, $p = .04$, $d = .25$), and less extrinsically motivated (*Midealistic* = 2.05 vs. *Mpragmatic* = 2.26; $F(1, 258) = 3.44$, $p = .07$, $d = .23$) than those in the pragmatic mindset condition. Moreover, the index of mediation was significant for both intrinsic motivation ($B = .25$, $SE = .13$, 95% CI = [.0315, .5508]) and extrinsic motivation ($B = -.07$, $SE = .05$, 95% CI = [-.1865, -.0011]).

Study 4

To further tested the mediation role of intrinsic versus extrinsic motivation, in this study, we investigated whether message framing, either intrinsically focused message or extrinsically focused message, had different impacts on charitable intention of consumers with different mindsets. 437 participants (56.8% women, average age = 37.62) from M-Turk participated in the study. The study followed a 2 (mindset priming: pragmatic mindset vs. idealistic mindset) * 2 (message framing: extrinsically focused message vs. intrinsically focused message) between-subjects design. First, we used the same procedure in Study 4 to prime participants' mindsets. Then participants were presented with a flyer describing the call for volunteers by American Heart Association. In the extrinsically focused message condition, we emphasized that volunteers will get preferential rates for heart diseases treatment in the future. In the intrinsically focused message condition, we emphasized that volunteers will feel good about helping out others in need and make a difference in our community. Following the volunteer scenario, we measured participants' volunteer intention.

The overall two-way interaction effect was significant ($F(1, 433) = 7.16$, $p = .01$). The overall effect of mindset and the overall effect of message framing were not significant ($p > .14$). Further contrast analyses showed that participants in pragmatic mindset condition were more likely to volunteer in the extrinsically focused message condition compared to intrinsically focused message condition (*Mpragmatic-extrinsic* = 6.31 vs. *Mpragmatic-intrinsic* = 5.59; $F(1,433)=4.43$, $p = .04$, $d = .28$). In contrast, participants in idealistic mindset condition were more likely to volunteer in the intrinsically focused message condition compared to extrinsically focused message condition (*Midealistic-extrinsic* = 6.02 vs. *Midealistic-intrinsic* = 6.59; $F(1,433)=2.82$, $p = .09$, $d = .23$).

GENERAL DISCUSSION

The present research makes a number of contributions both to theory and practice. First, by exploring how idealistic versus pragmatic mindsets influence consumers' charitable behavior, the current research extends the theoretical understanding of idealism versus pragmatism in the consumer context. This research answers calls by Kivetz and Tyler (2007) for further investigation of the idealism and pragmatism. Further, we contribute to the cross-culture literature by introducing a new cultural dimension that may add more nuance to our understanding of how charitable behaviors that differ across cultures and societies.

Second, by identifying the causal relationship between idealistic (vs. pragmatic) mindset and charitable behavior, we contribute to the charitable behavior literature. This research provides insight into the process of an influential mechanism on charitable behavior: idealistic (vs. pragmatic) mindset. Additionally, the theorization and empirical demonstration of extrinsic versus intrinsic motivation as the mechanism underlying the effect of idealistic (vs. pragmatic) mindset on charitable behavior is an important contribution to the literature on charitable behavior.

Last but not the least, our findings also contribute to the motivation literature. The current research shows that the extrinsically focused message (e.g. presence of extrinsic benefits) can indeed increase charitable tendency among consumers with pragmatic mindset since they are extrinsically motivated, but it doesn't work among consumers with idealistic mindset as it is inconsistent with their intrinsic motivation. Our theorization and empirical demonstration of how external benefits influence the giving tendency through the in(consistency) with consumers' motivations is an important contribution to the literature on motivation.

The findings from our research also have significant societal implications. Charity appeals adopt a variety of strategies to motivate people to help (Zhou et al 2011), our research suggests that charitable organization should take different strategies to motivate different consumers (e.g. consumers with pragmatic versus idealistic mindsets) to give. According to this research, charities attempting to increase helping from consumers with a more pragmatic mindset may be best served to emphasize the external rewards or the benefits of helping behavior. However, emphasizing external benefits may backfire among consumers with an idealistic mindset. Additionally, given prior research shows that consumers' mindset is malleable and contingent and it can be situationally activated (e.g., Nussbaum and Dweck 2008) or directly changed (see Dweck 2009), our research suggests that charitable organizations may also consider activating consumers' idealistic self, which is associated with more charitable behaviors.

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No Pain No Gain: Lose-Now-Gain-Later Intertemporal Choice Questions Better Predict Self-Care Behaviors

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EXTENDED ABSTRACT

Discounting research assumes that all intertemporal choices involve the psychological construct impatience. Do they? Participants made normatively-equivalent gain, loss, or mixed—gain-now-lose-later or lose-now-gain-later—intertemporal choices. Mixed choices yielded discount rates between gains and losses. Importantly, real-world behaviors with short-term costs and long-term benefits are best predicted by lose-now-gain-later choices.

People frequently make tradeoffs between gains and losses at different times, a phenomenon known as intertemporal choice (Loewenstein & Thaler, 1989). Research has shown that people's responses to intertemporal tradeoffs in laboratory settings predict how they make related tradeoffs in the real world, ranging from drug use and exercise to savings and other financial behavior (Bickel, Odum, and Madden, 1999; Chabris et al, 2008; Chapman, 1996; Hardisty & Weber, 2009; Hardisty et al, 2013; MacKillop et al, 2011; Madden et al, 1997; Meier & Sprenger, 2012; Reimers et al, 2009). However, the predictive power of lab measures of intertemporal choice has been quite modest, perhaps because these lab measures have focused almost entirely on choices between gains at different times. Yet, real-world behaviors almost always involve a *mixture* of gains and losses. For example, a consumer might choose whether to cut out and keep track of coupons: an immediate cost (in effort) paired with future savings. Or, a consumer may choose to take care of her teeth by brushing and flossing in order to reap benefits later on at the dental office.

While most past research has implicitly assumed that intertemporal choices all reflect the same underlying process (delay discounting), it is likely that multiple processes are at play; while the choice of an immediate vs future reward may reflect impulsivity, the choice not to floss does not seem "impulsive." Might mixed intertemporal choice questions represent a different psychology and better predict "mixed" real-world behaviors, such as flossing? Specifically, when faced with a decision between A) gaining a fixed amount today or B) paying a smaller amount today in exchange for a large amount later, how will people choose, as compared with the pure gain-now-or-later questions typically used in research? This question has not been addressed: Only a small number of papers have considered losses in intertemporal choice (e.g., Chapman, 1996; Hardisty & Weber, 2009; Hardisty et. al, 2013), fewer have considered mixed gains and losses in intertemporal choice (Ostaszewski, 2007), and none have explicitly compared pure gain measures with mixed measures: this is the focus of the current study.

Previous research using pure gain choices has found remarkably high discount rates (see Frederick, Loewenstein, and O'Donoghue, 2002), while research using pure loss choices has yielded much lower discount rates (Chapman, 1996; Hardisty & Weber 2009; Thaler, 1981). Because pure gains and pure losses represent two extremes on a continuum, we expected mixed sign choices to yield more moderate discount rates, falling between these two extremes. Stated formally:

Hypothesis 1   *Mixed-sign intertemporal choices will elicit moderate patience—greater patience then gain choices, but less patience than pure loss choices.*

In previous research, correlations between discount rates derived from intertemporal choice measures and real world behaviors have been modest at best (e.g., MacKillop et al, 2011). Real-world behaviors rarely involve decisions between smaller gains in the short term and larger gains in the long term. Rather, these decisions more often involve tradeoffs between both gains and losses over time. Because the psychology of mixed "lose-now-gain-later" intertemporal questions more closely mirrors the psychology of certain real world intertemporal choices (such as flossing), we expected that the predictive power of mixed discounting measures would be stronger in these cases. Stated formally:

Hypothesis 2   *Mixed lose-now-gain-later intertemporal choice measures (vs. pure gain or pure loss intertemporal choice measures) will correlate more strongly with real-world intertemporal choices that require an immediate cost for a future benefit.*

Method

We recruited 3,200 MTurkers with 95% or better approval ratings in the summer of 2017 for a 7-minute study on decisions over time with a compensation of $0.85. Participants were randomly assigned to one of four between-subject (gain, loss-gain, loss, or gain-loss) intertemporal choice measures. All participants then answered a series of questions about "real-world" intertemporal behaviors.

Titration Measures

First, all participants read "In the next set of questions, we will ask you about gaining (i.e., receiving $__) or losing money (i.e., having to pay $__) at different points in time. Although these questions are hypothetical, please do your best to treat them as if they were real." For the titration measure, participants read, "These questions are about [both] [receiving (i.e., **gaining**)] [and paying (i.e., **losing**)] money. Please choose which option you would prefer in each pair:" The parts in brackets changed depending on the experimental condition. Next, participants faced a series of 17 choices between immediate options and delayed options. Participants in the Gain condition considered choice options such as "receive $50 today" vs "receive $100 in 3 months," where the later amount was fixed and the sooner amount varied from $25 to $105 in increments of $5. Participants in the Loss-Gain condition saw the same normatively-equivalent set of options, but with a transformation: $25 today was subtracted from both options, for example "receive $25 today" vs "pay $25 today and receive $100 in 3 months." Thus, the delayed option in the Loss-Gain condition was a mixed outcome with both an immediate loss and a future gain. Participants in the Loss and Gain-Loss conditions saw the same set of options, but with gains and losses reversed.

Finally, all participants answered a series of 28 questions about real-world behaviors with intertemporal aspects. This list of questions was adapted from a similar list of questions used by Li and Bartels (working paper), which were generated by combining the behavioral questions from prominent papers relating discount rates to real world behaviors, such as those cited above.

Results

Data cleaning and processing

We cleaned the data file following Li & Bartels (working): We first removed participants with duplicate IP addresses (keeping the first survey attempt and removing the second) or incomplete survey attempts, leaving 3121 legitimate completions for further analysis. Height and weight were converted to a Body Mass Index (BMI) score using the standard formula, $703 \times \text{weight(lb)}/\text{height}^2\text{(in)}$. Thus, 27 "real world" behavior variables remained for further analysis.

For each participant, we calculated the indifference point between the sooner and later options by averaging the options before and after the participant switched their choices between the sooner and later options. For example, if a participant chose $100 today over $100 in 3 months, but chose $100 in 3 months over $95 today, the indifference point would be $97.50 today vs. $100 in 3 months. If the participant "maxed out" the scale by always choosing the sooner option (3% of the sample did this) or always choosing the later option (6% of the sample did this), we simulated one additional $5 increment in the scale and used that to calculate the indifference point. For example, a participant in the Gain condition that always chose the "today" option would be given an indifference point of $22.50 today vs. $100 in 3 months.

To more easily compare time preferences across conditions and to better compare with previous research, we converted the indifference points to discount rates using the continuously compounded exponential formula, $V_1 = V_2 + Ae^{-kD}$, where V_1 is the present value (i.e., the option on the left), V_2 is the "today" value from the option on the right, A is the future amount, e is the constant 2.718, k is the (fitted) discount rate, and D is the delay in years. For example, for a participant indifferent between "receive $72.50 today" and "pay $25 today and receive $100 in 3 months", the formula would be $72.50 = -25 + 100 \times 2.718^{-k \times 3/12}$, or $k = .10$, meaning a discount rate of 10%. We chose the exponential formula rather than a hyperbolic formula (e.g., Mazur 1987) because the numbers are more interpretable (ie, $k = .20$ is a 20% discount rate in standard economic terms) and the results are nearly identical either way.

Comparison of discount rates

As confirmed with a between-subjects ANOVA, mean discount rates varied by condition, $F(3,2820) = 80.5$, $p < .001$, $= .08$. Pairwise comparisons confirmed that discount rates were higher in the Gain condition than the Loss-Gain condition, $t(1535) = 4.3$, $p < .001$, as well as the other two conditions, both $p < .001$. Likewise, the Loss-Gain condition was higher than the Loss condition and the Gain-Loss condition, both $p < .001$. There was no difference between the Loss and Gain-Loss conditions, $t(1285) = 0.3$, $p = .74$.

Correlations with "Real-World" Intertemporal Behavior Questions

Next we examined how much discount rates correlated to each of the "real-world" intertemporal behavior questions. First, we ran separate correlations for each condition, between the discount rate and the behavior. Overall, correlations were modest, as is typical for intertemporal choice research (Chabris et al., 2008; Reimers et al., 2009). We calculated the average of the absolute values of the correlations, and found that the loss-gain (LG) condition yielded the highest correlations overall, with $r = .08$, compared with $r = .06$ for the gain condition, $r = .05$ for loss, and $r = .06$ for gain-loss.

To gain more insight on the large number of behavioral questions, we conducted an exploratory factor analysis. A scree plot yielded an inflection point after five factors. After applying an oblimin transformation, we assigned each of the 27 behavioral measures

in our dataset to the factor on which it loaded strongest. Doing so led to the following model:

- Financial ~ Credit Card Full Payment + Credit Card Debt + %Income Saved + Wealth Accumulation + BMI + Credit Card Late Frequency + Propensity to Leave Dishes Unwashed

- Impulsivity ~ Cell Phones While Driving + Driving Recklessly + Number of Speeding Tickets + Punctuality + Tendency to Start Tasks Well Before Deadlines + Prescription Drug Use + Overeating

- Self-care ~ Dental Cleaning Frequency + Doctor Exam Frequency + Sunscreen Use + Education Level + Coupon Use + Flossing

- Fitness ~ Fitness Activity + Physical Activity + Diet Monitoring

- Vices ~ Nicotine Use + Drug Use + Alcohol Use + Gambling

Using the Lavaan package in R, we conducted a confirmatory factor analysis using this five-factor model. We addressed missing data using full information maximum likelihood, which attempts to utilize all of the information available in the data set without using imputation and assumes that all missing variables are missing completely at random. We then examined correlations between the discount rates in condition with each of the five factors.

Our findings indicate that the suitability of pure gain, pure loss, gain-now-lose-later, and lose-now-gain-later as predictors of real-world intertemporal choice behavior depends critically on the type of behavior being investigated. Notably, discount rates calculated using pure gain (G) tasks are comparable in their predictive value to discount rates calculated using loss-now-gain-later (LG) tasks when predicting financial decision-making behaviors. However, LG discount rates better predict self-care and vice behaviors. Pure loss (L) discount rates appear to have the lowest predictive power of the four discount rates. Also of interest are the factors that our calculated discount rates did not predict well, namely impulsivity and fitness behavior. These findings contribute to our understanding of intertemporal discounting behavior by providing a categorical structure of such behaviors. Moreover, they suggest that these different types of behavior have different underlying psychological processes associated with them.

Discussion

Our findings reveal that people have high discount rates for intertemporal choices which involve pure gains and are significantly lower for mixed choices and pure loss choices. Surprisingly, behaviors associated with impulsivity, such as one's propensity to use a cell phone while driving, were not correlated at all or correlated very weakly to discount rates. This may be because the "cold" financial decision scenarios do not match the "hot" decision environment of impulsive choices.

We also find that discount rates calculated from "lose-now-gain-later" questions were more predictive of intertemporal choice behavior than discount rates calculated from the simple "smaller gain now vs. larger gain later" tasks used in nearly all past research. This was especially true when predicting preventative behaviors, such as dental hygiene or sunscreen use. Our results suggest that mixed outcome intertemporal choices are a promising technique for future research and for real-world predictions. We note that any intertemporal choice can easily be adapted to the method used in our paper simply by subtracting some fixed amount (e.g. $25 now) from both sets of choices, thus using this technique is easy and we hope will become widespread.

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The Differential Effects of Face Gain versus Face Loss on Luxury Brand Consumption

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EXTENDED ABSTRACT

China has now become the world's second largest luxury market. While there could be multiple explanations, prior research suggests a link between this booming of China's luxury market and Chinese consumers' concern with "face" (Li &Su, 2007; Wong & Ahuvia, 1998; Yau, 1988). "Face" has been labeled "the most delicate standard by which Chinese social intercourse is regulated" (Lin, 1935, p.200), and Wong & Ahuvia (1998) claim that face plays an important role in Chinese luxury consumption. The Chinese concern with face exerts a mutually coercive power upon the members of the social network, raising the pressure upon them to purchase *luxury and visible* (LV) products. Logically, in order to be motivated by face-related concerns, those products should be purchased that are both high in their luxury characteristics and in the public, visible nature of their consumption. We label this "LV," for "luxury and visible" brand consumption. Resemblance to the "LV" logo of Louis Vitton is purely coincidental but highly appropriate.

Luxury consumption by a Chinese consumer thus is plausibly a means by which that consumer can show others how she is superior to others around her, allowing her to gain face – or, alternatively, she could be buying LV products simply to keep up with her peers, thus maintaining (not losing) face. It has not however been studied in the prior literature. What are the possible sub-dimensions of face and their possibly differential effects on LV consumption? Is a high concern with face "symmetric" over the possible gaining of face, versus the losing of face, or does one of them matter more for the purchase of visible high-luxury goods? Nor does the prior research examine how the need for face (and its effect on LV consumption) varies across individuals and situations.

We study these questions here, as well as the interactions between an individual's need for face and one other important determinant of an individual's luxury consumption behaviors. As a collectivistic Asian country, China is supposedly a country that greatly values interdependence and social relationships (Triandis, 1995). How then does a consumer's need for face interact with her level of self-construal (how the self is defined in relation to others: Markus & Kitayama, 1991)?

LITERATURE REVIEW AND HYPOTHESES

"Face" is originally a concept developed in Chinese Confucian society and, since ancient times, has been called the "spiritual creed" of the Chinese people (Lu, 1934). Many traditional Chinese proverbs deal with the importance and need for face, such as "To undergo a terrible ordeal in order to save face," "A person needs face like a tree needs bark," and "Body suffering is better than face getting a fever". Although some previous research has further differentiated the face construct into different dimensions such as self-face, other-face, and mutual face (Oetzel& Ting-Toomey, 2003; Ting-Toomey &Kurogi, 1998; Mak, Chen, Lam, &Yiu, 2009), we focus here only on the face construct per se.

Gaining versus Not Losing Face

In all societies, people have experienced feelings of both gaining and losing face, because of the positive or negative social evaluations that accompany them (Hwang, 2006). Ho (1976) proposed that the consequences of gaining face, and of not losing face, are not assessed according to the same set of criteria, since the baseline criteria used by society for each of these are different. Specifically, while there may well be some people who have little interest in showing off their success, everyone has to save his face to maintain a minimum level of effective social functioning (Ho, 1976). When a person has failed to protect his face, he feels rejected by others, which causes the person to feel painful emotions, creating a strong motivation to restore lost face (Kim &Nam, 1998; Ting-Toomey, 1988).

In sum, the argument can be made based on the prior literature that Chinese consumers are far more concerned with protecting their face (concern with face loss, or CFL) than they are concerned with face gain (CFG). Such an expectation is also conceptually consistent with the losses-loom-larger ("loss aversion") effect in prospect theory (Kahneman & Tversky, 1979). Hence, it is reasonable to expect that an actual or anticipated 'loss of face' should be more motivating in prompting purchases of LV products, than a desire to 'gain face' over others.

Chronic Face Needs versus Situationally-varying Face Needs

Since face has been described as the level of social esteem, recognition, respect, prestige and status, received by *individuals* from others *in social contexts*, it naturally involves both the individual himself – and that individual's self-concept or self-image – as well as the *situationally-varying relationship* between that individual and the social environment.

Though some scholars have explicitly argued that face is not a personality variable (e.g., Goffman, 1955; Ho, 1976), it clearly does involve the situational consistency usually ascribed (Sirgy, 1982) to one's self-concept or self-image (Wong & Ahuvia, 1998). Shi et al. (2012) find that certain individuals tend to be consistently higher in their need for face-related concerns than others. Situational invariance in the need for face is also implied by the treatment of the need for face as something that varies across cultures, e.g., its level is lower on average among Americans than among Chinese consumers (Li & Su, 2007; Triandis & Gelfand, 1998; Wong & Ahuvia, 1998).

On the other hand, face is also clearly a social construct, which by implication means the intensity of an individual's need for face should vary across social situations (Chen, 1990; Goffman, 1955; Ho, 1976; Hu, 1944; Hwang, 1987; Li & Su, 2007; Ting-Toomey, 1988). It has been pointed out that "donating one's possessions to the public" can be considered as a way of situationally enhancing face (Hu, 1944). A dinner party is an even more subtle face-giving and face-maintaining situation, in which the host gives "face" to the guest through the quality of the food, the proper degree of ostentation and the boisterous atmosphere, and simultaneously maintains or gains "face" through the presence of important guests and the number of guests (Chen, 1990).

Given that the need to gain face or not lose face can thus vary both across individuals and across situations, it is of interest to see how these two determinants operate jointly: do they operate in an 'additive' manner, magnifying each other when they are in alignment and cancelling each other out when not? Or, alternatively, is one of them clearly the more dominant influence, with the other playing a

much weaker or non-existent role? We hypothesize that there is an additive congruence effect between chronic face concerns and situational face

Moderating Effects of Self-Construal

Markus & Kitayama (1991) found that in both Western and Eastern cultures self-construal (i.e., how the self is defined in relation to others) can be categorized into two dominant types. "Independent self-construal" (IND-SC), relatively more dominant in Western cultures, exists when people tend to believe in the inherent separateness of each individual person, while "interdependent self-construal" (INT-SC), more dominant in Eastern cultures, exists when people tend to weigh more heavily the connections among people in a large social group. However, as has been recently argued by Oyserman & Sorensen (2009) and others, self-construal can vary not only across cultures but also within the same culture. Briley & Wyer (2001) found that Chinese people feel no more emotionally connected to important others than do American people, when they are exposed to pictures of American cultural icons (i.e., they are 'primed' in a counter-cultural way).

Using Ho's (1976) logic, IND-SC consumers ought to still buy LV goods for face-saving reasons, even if they do not do so for face-gaining reasons. Further, the additivity and congruence principles suggest that these baseline societal concerns among IND-SC consumers to not lose face should lead to their highest LV face-saving consumption when (a) they are in situations that also make face-loss (rather than face gain) salient, and (b) when they also have a high chronic CFL (versus CFG).

INT-SC consumers, on the other hand, should behave differently. Wong & Ahuvia (1988, p. 437) argue that interdependent consumers in Asia are focused more on their public outer self and much less on their internal self-preferences (i.e. their own chronic CFL and CFG). Because group norms in newly-industrializing and high status-mobility Asian countries emphasize public and visible possessions (Batra et al. 2000), such interdependent consumers should thus be most sensitive to face needs in situations that require them to *gain* face, via display of publicly-visible status markers that others care more about. So LV consumption should be higher for INT-SC consumers in face gain situations -- especially if their chronic face concerns are also CFG.

STUDY 1: MEASURING CHRONIC INDIVIDUAL CONCERN WITH FACE GAIN (CFG) AND CONCERN WITH FACE LOSS (CFL)

Using the extensive literature related to face (e.g., Goffman, 1955; Hu, 1944; Ho, 1976; Ting-Toomey, 1988; and others), focus group discussions with students, and assessments from some authors in the literature we preliminary identified a total of 29 items (after starting with 96) that covered CFG and CFL. In making this preliminary selection, we sought items that applied well to our research domain of consumption. As pointed out by Ajzen and Fishbein (1977), scales are more predictive of downstream behaviors if they are more specific to the objects and domains under study.

In addition to our 29 face-related items, we also identified previously-published standard scales on other constructs that conceptually overlapped with the face domain, in order to assess discriminant validity. These included Need for Status (five items; Eastman, Goldsmith, & Flynn, 1999), Susceptibility to Normative Influence (eight items; Bearden, Netemeyer, & Teel, 1989), and the success-related sub-dimension of Material Values (six items; Richins & Dawson, 1992).

Our results demonstrated the superiority of our newly developed CFL (3-items) and CFG (3-items) scales for chronic face concern measurement in the broad domain of consumption. We also showed that these two scales nonetheless possess discriminant validity from other consumption-related constructs such as the Need for Status, the Susceptibility to Normative Influence, and Materialism Values. Thus, we used our new 6-item CFL and CFG scales in all the following studies, in which we conducted experiments to examine the interplay between CFL/CFG, situational face gain and loss, and self-construal, on the purchase of luxury brands consumed in a visible manner (LV brands). Results from these subsequent experiments also provide nomological validity support for our new CFG and CFL scales.

STUDY 2: INTERACTIONS OF CHRONIC AND SITUATIONAL FACE GAIN/LOSS WITH MEASURED SELF-CONSTRUAL

This study used a between-subjects design, manipulating situational face at two levels (gain vs. loss) but measuring the two other factors: chronic face concerns (via our CFL and CFG scales) and chronic self-construal (independence vs. interdependence). Respondent scores on the CFL (α=.63) and the CFG (α=.73) scales were averaged separately. For self-construal, we used a 12 item self-construal scale, following Gudykunst & Lee (2003) and Gudykunst et al. (1996), which included 6 items for independence and 6 items for interdependence. The 6 items for independence (α=.60) and 6 items for interdependence (α=.74) each were undimensional (in an EFA) and had adequate reliability. EFA with Varimax rotation indicated that the factor loadings for independence were .476 to .764 and those for interdependence were .527 to .805. There was no significant cross-loading. We used as our dependent variable the multiplicative product of the luxury-rating of the brands chosen by our experimental subjects and the extent to which the consumption of these brands is publicly visible in nature.

We found support that CFL influences LV (luxury and visible) spending more than CFG does. Our additive congruency hypothesis between chronic face loss and situational face -- consumers' LV spending being higher for higher CFL consumers in a face loss situation -- only found support among low IND-SC (independent self-construal) consumers. The analogous hypothesis for face gain was however not supported at all. Importantly, the observed significant interaction showed that for higher IND-SC consumers, higher CFL consumers and a situational face loss are likely to lead to the higher purchases of LV brands. However, the analogous hypothesis for INT-SC (interdependent self-construal) consumers did not find support. In sum, the observed effects seem to be more consistent with expectations for CFL and IND-SC than they are for CFG and INT-SC.

STUDY 3: INTERACTIONS OF CHRONIC AND SITUATIONAL FACE GAIN/LOSS WITH MANIPULATED SELF-CONSTRUAL

To test the relationships between chronic and situational face gain vs. loss, and self-construal, this study manipulated both situational face (gain vs. loss) and self-construal (independent vs. interdependent) in a 2x2 between-subjects design, with chronic face concerns (i.e., our CFL and CFG scales) measured within-subject as a continuous variable and included in the data analysis. We then compared the degree to which the respondent desired to buy luxury and visible products, using our LV Index (described earlier), across conditions.

Study three used a manipulation of self-construal, allowing for a stronger test of interactions with this construct and also stronger tests of all our hypotheses. We again found support that CFL influences LV spending more than CFG does. Supporting our additive congruency hypothesis between chronic and situational face, Study 3 found that consumers' LV spending is higher for high CFG consumers in a face gain situation, and for higher CFL consumers in a face loss situation. Importantly, we found support for the hypothesized three-way interaction between CFL, situational face and self-construal. Consistent with expectation, independent self-construal consumers display a pattern of additive congruence, being likely to purchase LV brands the most when they are both higher in CFL and in a congruent face loss situation. However, we still found (contrary to expectation) that interdependent self-construal consumers are likely to spend as much on LV brands in face gain situations as they are in face loss situations, regardless of their CFL and CFG levels.

DISCUSSION

Our research makes several valuable contributions to the literature. First, it draws on the prior literature on the face construct and develop valid and reliable measures for, the desire to gain face versus to not lose face as two separate, distinct motivational dimensions. We show that our measures out-perform others that have been suggested (e.g., Zane and Yeh 2002; Zhang et al., 2011). Second, we hypothesize and demonstrate that Chinese consumers' desire to buy luxury and visible (LV) products is related more strongly to their desire to not lose face (be seen as inferior), rather than to a need to gain face (demonstrate superiority) over others. Third, we show that this individual-level chronic need for face interacts in a plausible 'additive congruency' manner with the type of face-need (to gain, versus to not lose, face) that may exist in specific situations. Fourth, we test hypothesized interactions of the separately-measured needs to gain (versus not lose) face with the individual–level factors of independent versus interdependent self-construal (Markus & Kitayama, 1991), thus examining and providing nomological validity for the dimensions of face gain and face loss.

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To Be Close or Not to Be Close? How Power Distance Belief Changes the Role of Physical Distance in Consumer Evaluations of the Salesperson and Purchase Decisions

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EXTENDED ABSTRACT

Sales activities are one of the key determinants of a profitable business (Helmer 2018). U.S. companies spend 20 billion dollars annually on sales service training (Retrieve 2016). Prior research suggested factors that affect consumer evaluations of the salesperson and sales performance, such as a salesperson's gender, aptitude, skill, and motivation, and other environmental factors (Churchill et al. 1985; Crosby, Evans, and Cowles 1990; Kotzé et al. 2012). However, several important questions regarding the appropriate customer interaction approach for salespeople are still left unsolved (Bonney, Plouffe, and Brady 2016). This research attempts to provide insights regarding how a salesperson should interact with customers in a retail environment by examining the effect of physical distance on customer perceptions and decisions.

How does physical distance of a salesperson to a shopper affect evaluations of salesperson performance and subsequent purchase decisions by the shopper? Prior research examining the role of physical distance of an employee in the retail environment provides mixed evidence. Some prior research suggests shoppers often dislike a salesperson who stays close to them because the salesperson can be seen as invading their personal space or trying to be pushy (e.g., Arnold et al. 2005). In contrast, there is also research suggesting that physical proximity can lead to positive evaluations in retail service contexts (Esmark and Noble 2018; Hornik 1992; Price, Arnold, and Tierney1995). For example, Esmark and Noble (2018) suggest that physical proximity of a salesperson to a shopper increases the shopper's purchase intentions. The present research aims at reconciling this conflicting evidence by introducing individuals' cultural orientation as an important moderator of the effect of physical distance. More specifically, we propose that a cultural orientation of power distance belief (hereafter PDB) will moderate the effect of physical distance on consumers' evaluations of salesperson performance and subsequent purchase intentions/behaviors. Perceptions of (dis)respect will underlie this effect.

PDB indicates the degree of power disparity individuals expect and accept (Hofstede 2001; Oyserman 2006). We suggest low-PDB individuals, who are less receptive to power disparity, will evaluate the salesperson more negatively when the salesperson stays physically close to (vs. distant from) them. In service contexts, customers who possess purchasing power can be typically considered higher in power and status than the employees who provide service to the customers (Price 2009; Tomkins 2005). However, low-PDB consumers, who expect lower power disparity in their relationships with others, may not naturally perceive that they are in a superior position than the salesperson. As such, low-PDB consumers can be more likely to interpret physical proximity of a salesperson negatively as a signal of disrespect and invasion of their personal space, given that physical proximity can be viewed as an individual's demonstration of power and dominance, and attempt to influence others (Balinese et al. 2001; McQuiston and Morris 2009). Given that consumers value respect from salespeople in service contexts (Darian, Tucci, and Wiman, 2001), perceptions of disrespect will, in turn, negatively affect consumer evaluations of the salesperson performance and subsequent purchase decisions.

In contrast, high-PDB consumers will be less likely to infer disrespect from physical proximity and may even perceive it as a positive signal of respect and service effort. High-PDB individuals believe that power hierarchy can bring order to society (Hofstede 2001; Oyserman 2006). Compared to their low-PDB counterpart, they are more receptive to the idea of people with lower power and status serving or being attentive to people with higher power and status. Therefore, in a service context in which customers may be perceived as having higher power and status than employees, high-PDB consumers can interpret physical proximity of a salesperson positively as the salesperson's service effort, attention, affiliation motive (Xu, Shen, and Wyer 2011), and moreover, respect for them. Accordingly, high-PDB consumers' evaluations of salesperson and purchase decisions can be enhanced by the salesperson's physical proximity to the consumer.

Together, we propose the interactive effect of physical distance and PDB on consumers' evaluations of salesperson performance and purchase intentions, mediated by perceptions of (dis)respect from the salesperson. We examine the effects of both country-level and individual-level PDB and expect that in a low-PDB culture (country-level), physical proximity will have primarily negative effects and decrease salesperson evaluations and purchase intentions among low-PDB consumers (individual-level), with this effect disappearing for the high-PDB consumers (individual-level) within this culture. In a high-PDB culture (country-level), physical proximity will have largely positive effects and increase salesperson evaluations and purchase intentions among high-PDB consumers (individual-level), with this effect disappearing for the low-PDB consumers (individual-al-level) within this culture. Next, we present six studies (including both lab and field studies) testing these predictions.

STUDY 1: COUNTRY-LEVEL PDB EFFECTS

Study 1 tested our basic prediction about the interaction effect of physical distance and PDB on consumers' evaluations of the salesperson and purchase intentions using country-level power distance index (PDI). Participants were recruited from two countries of different levels of power distance according to Hofstede's country-level PDI (Hofstede 2015).

The study was a 2 (country-level PDI: low [the U.S.; PDI = 40] vs. high [China; PDI = 80]) × 3 (distance: close, far, or unknown) between-subjects design. Participants from both countries (339 Chinese and 340 American) imagined that they were shopping in a clothing store and a salesperson was staying either close to them, far from them, or unspecified depending on the condition. (Along with this manipulation, a picture illustrating the distance from the salesperson was presented to the participants.) After reading the scenario, participant completed measures for perceptions of salesperson performance (e.g., ability, competence), their attitudes toward the salesperson, and perceptions of respect from the salesperson. Participants also reported several behavioral intentions, such as purchase intentions and future purchase intentions.

An ANOVA on salesperson performance revealed a significant interaction between PDB and distance ($F(2,673) = 30.76$, $p < .001$). As theorized, the U.S. (low-PDB culture) participants evaluated the salesperson who was closer to (vs. far from) them as less competent ($M_{Close} = 5.89$ vs. $M_{Far} = 6.42$, $p < .05$; $M_{No-info} = 7.41$). In contrast, Chinese (high-PDB culture) participants evaluated the closer (vs. far) salesperson as more competent ($M_{Far} = 4.72$, $M_{Close} = 6.72$, $p < .05$; $M_{No-info} = 7.16$).

The same pattern of interaction also emerged for attitudes toward the salesperson ($F(2,673) = 27.40$, $p< .001$), evaluations of the shopping experience ($F(2,673) = 27.65$, $p <.001$), purchase intentions in the given shopping situation ($F(2,673)=12.55$, $p= .00$), likelihood of future visit ($F(2,673)=21.39$, $p<.001$), and future purchase intentions ($F(2,673)=19.36$, $p< .001$).

Furthermore, the same pattern of interaction also occurred for perceptions of respect from a salesperson ($F(2,673)= 32.79$, $p<.001$). A bootstrapping analysis for moderated mediation (Hayes 2013; Process model 8) revealed significant indirect effects via respect on performance evaluations (index of moderated mediation: -1.02; 95% CI: -1.31 to .73) and purchase intentions (index of moderated mediation: -.57; 95% CI: -.75 to -.40). Consumers in a high-PDB culture interpreted physical proximity as a signal of respect, whereas consumers in a low-PDB culture interpreted physical proximity as a signal of disrespect, which in turn, resulted in different perceptions of the salesperson and purchase intentions in different countries.

STUDY 2: FIELD STUDY IN A HIGH-PDB CULTURE

We conducted a field study to demonstrate the interaction effect of PDB and distance by temporarily activating an individual-level PDB within a high-PDB culture (China). Participants were 220 customers of a clothing boutique in China. As the participants entered the store, they received a survey packet, which contained a priming task of PDB on its cover (low vs. high; Hofstede 2003). After working on the PDB priming task, participants continued browsing and shopping in the store. After they finished shopping, they completed other measures in the packet, including their perceptions of distance from the salesperson while shopping in the store, perceptions of salesperson performance, and their actual purchases (number of items bought and amount of money spent).

A regression analysis on salesperson performance revealed a significant interaction between PDB and distance ($\beta = -.28$, $t = -2.37$, $p < .05$). Consistent with the findings from the Chinese respondents in study 1, physical proximity had a positive effect on perceptions of salesperson competence in the high-PDB condition ($p <.05$), but this effect disappeared in the low-PDB condition.

More importantly, the same pattern of interaction was found on actual purchase decisions, including number of items bought ($\beta= -.27$, $t= -2.00$, $p<.05$) and amount of money spent in the store ($\beta= -.28$, $t= -2.08$, $p< .05$).

In a high-PDB culture, for customers primed with high PDB, physical proximity of the salesperson increased evaluations of salesperson performance and actual purchases in a retail store. In contrast, for customers primed with low PDB, these effects were mitigated.

STUDIES 3A AND 3B: INDIVIDUAL-LEVEL PDB EFFECTS IN A LOW-PDB CULTURE

Complementing study 2 conducted in a high-PDB culture (China), studies 3A (N=151) and 3B (N=235) examined the interaction effect of distance and individual-level PDB within a low-PDB culture (the U.S.). In study 3A, we temporarily activated different levels of PDB using a sentence-unscrambling task. In study 3B, we measured individuals' chronic PDB (Yoo, Donthu, and Lenarowicz 2011). Participants in both studies imagined themselves in a shopping situation in which a salesperson either stayed close to them or kept some distance from them (similar to study 1). After that, participants reported their perceptions of salesperson performance. In study 3B, participants also reported their purchase intentions and completed a scale of PDB.

In study 3A, an ANOVA on salesperson performance revealed a significant interaction between PDB and distance ($F(1,47) = 4.13$,

$p< .05$). That is, individuals primed with low PDB judged the salesperson who stayed close to them (M_{Close} = 5.26) significantly less competent than the salesperson who was more distant from them (M_{Far} = 7.21, $p< .05$). However, salesperson evaluations by individuals primed with high PDB were not affected by distance (M_{Far} = 6.82, M_{Close} = 6.25, $p> .05$).

In study 3B, a regression analysis on salesperson performance replicated the interaction of PDB and distance ($\beta = -.32$, $t = -2.55$, $p < .01$): proximity of the salesperson decreased evaluations by participants with low PDB, but this effect disappeared for participants with higher PDB (Johnson-Neyman analysis showed that the distance effect became insignificant when PDB was .83SD above the mean or higher). Furthermore, the joint effect of PDB and distance carried over to influence purchase intentions ($\beta = -.21$, $t = -1.95$, $p< .05$; Johnson-Neyman point: +.91SD).

Thus far, we demonstrated that PDB alters the role of physical distance in consumers' evaluations of salesperson performance and purchase intentions/decisions. What is driving this effect? Study 1 presented a preliminary evidence of the proposed mechanism via perceptions of respect for the effects of country-level PDB and distance. Next, we more formally explore the mechanism via (dis)respect for the effects of individual-level PDB and distance to enhance internal validity.

STUDY 4A: THE MEDIATING ROLE OF PERCEPTIONS OF (DIS)RESPECT

Studies 4A and 4B were conducted in a low-PDB culture (U.S.) and examined the proposed underlying mechanism for the effects of individual-level PDB and distance. Specifically, study 4A provided a test of the mediating role of (dis)respect by measuring perceptions of (dis)respect. Participants (N=136) imagined themselves in a shopping scenario, which included a manipulation of distance (close vs. moderately distant) from a salesperson as in study 3. After that, participants reported their perceptions of salesperson performance, respect from the salesperson, and a scale of PDB.

A regression analysis on salesperson performance replicated the significant interaction between PDB and distance ($\beta = -.57$, $t = -2.29$, $p < .05$): negative effect of proximity was significant when PDB was low but disappeared when PDB was high (Johnson-Neyman analysis indicated that this effect became insignificant when PDB was 1.94SD or higher).

A bootstrapping analysis for moderated mediation (Hayes 2013; PROCESS model 8) supported our prediction about the mediating role of respect (Index of moderated mediation = -.46; 95% CI: -.89 to -.03). As expected, the indirect effect of distance via (dis)respect on salesperson performance perceptions was significant when PDB was low (2.12, 95% CI: -1.35 to 3.00), but the indirect effect was attenuated when PDB was high.

STUDY 4B: MANIPULATION OF (DIS)RESPECT

Study 4B was conducted to provide further support for the underlying mechanism via moderation (Spencer, Zanna, and Fong 2005). We directly manipulated respect from the salesperson and expected that the interaction effect of distance and PDB will be attenuated when consumers perceive higher respect from the salesperson regardless of distance.

The study was a 2 (respect: neutral vs. high) × 2 (distance: close vs. far) between-subjects design. Participants (N=322) imagined themselves in a shopping situation in which a salesperson stayed either close to them or far from them. Perceived respect from the salesperson was also manipulated in the shopping scenario.

A regression analysis revealed a significant three-way interaction between PDB, distance, and respect ($\beta = .72$, $t = 1.98$, $p < .05$) on salesperson performance. Specifically, the two-way interaction between distance and PDB was significant in the control condition as in earlier studies ($p < .05$). However, the interaction effect disappeared in the high-respect condition ($p = .6$): participants perceived salesperson performance to be high regardless of PDB and distance.

GENERAL DISCUSSION

The findings from the present research demonstrate that a cultural orientation of power distance belief (PDB) changes the effect of physical proximity of a salesperson on customer perceptions of the salesperson's performance and purchase decisions, driven by perceptions of (dis)respect from the salesperson. Although consumers with high PDB perceive physical proximity of a salesperson as a signal of respect from the salesperson, consumers with low PDB interpret physical proximity of a salesperson as a signal of disrespect. These perceptions of (dis)respect subsequently change consumers' evaluations of salesperson performance as well as purchase intentions and actual purchase decisions in the given shopping situation.

This research makes unique theoretical and practical contributions by demonstrating PDB as a novel moderator of the effect of physical distance/proximity of an employee on consumer attitudes and behaviors in retail service contexts. Prior research provides divergent evidence on the role of physical distance of employees to consumers in a retail environment, and our research suggests that a more nuanced understanding is needed for the role of physical distance in the retail environment. In addition, research on cultural perspectives in the retail environment has been only sporadic despite its growing significance in the global marketplace (e.g., Grewal et. al 2003). Hence, we contribute to this literature by examining the role of cultural orientation in retail employee-customer service interactions. We believe that our research will spur more interest in this important area of research. We also provide practical implications for the managers by pointing to the importance of adapting retail sales and service strategies to different cultures and individuals.

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"On Eating Ugly": How Political Ideology Shapes Preferences for Inferior Products

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EXTENDED ABSTRACT

Political ideology is an increasingly important aspect of consumer identity (Gallup 2012; Iyengar and Westwood 2014). In contrast to existing research which examines how ideology shapes preferences for conspicuous, typically superior status products (Kim, Park, and Dubois 2018; Ordabayeva and Fernandes 2018), we examine how political ideology influences preferences for inferior products. In doing so, we seek to identify factors that can enhance the appeal of inferior products such as ugly produce, which are often devalued and wasted (Grewal et al. 2018).

Prior work would predict that conservatives should be more averse to inferior products than liberals, because such products (1) defeat conservatives' goal to signal superior qualities in the vertical hierarchy (Ordabayeva and Fernandes 2018), (2) are associated with private labels rather than national brands (Khan, Misra, and Singh 2013), and (3) signal impurity (Haidt and Graham 2007). In contrast, we propose that conservatives may be more (rather than less) attracted to inferior products compared to liberals, because conservatives are more likely to believe that things, including products, are in balance. Therefore, conservatives engage in compensatory inferences when faced with inferior products (i.e., believe that a product's inferiority on one dimension must be compensated by its superiority on another dimension) to maintain their beliefs in balance. Furthermore, we propose two strategies that can mitigate and even reverse this tendency: pre-emptively affirming conservatives' need for balance and explicitly highlighting the inferiority of the item's producer. Five experiments test these predictions.

In Experiment 1 ($n = 205$) participants reported their ideology on a single-item scale (1 = extremely liberal to 9 = extremely conservative) and then evaluated two product replicates. The first replicate featured two options of laptops, one of which was inferior to the other (Chernev and Carpenter 2001). Participants indicated which of the two options they found more attractive, which of the two options would perform better on an unobserved attribute (i.e., laptop memory) and which of the two options they would be more willing to purchase. The second replicate featured two options of oranges, one of which was unattractive (ugly) compared to the other. They indicated which option would be tastier, which option would be more delicious, and which option they would be more willing to purchase. Finally, we measured participants' beliefs in balance on a 4-item scale (e.g., the universe is in balance; after the rain, comes the sun). Conservatives evaluated the inferior laptop and the inferior orange more positively than liberals (p's < .001). Conservatives' (vs. liberals') stronger beliefs in balance ($p < .001$) mediated this effect.

Experiment 2 ($n = 415$) manipulated political ideology. Participants first identified a social issue on which they had a conservative (vs. liberal) position and then wrote about a time in which they did not behave according to their conservative (vs. liberal) views on the issue. Afterwards, participants evaluated the same products as in experiment 1. Evaluations of the inferior laptop and produce were higher in the conservative condition than in the liberal condition ($p = .016$; $p = .053$, respectively).

Experiment 3 ($n = 503$) tested whether the effect was driven by conservatives' preference for the inferior option, as we propose, or by liberals' preference for the superior option. Participants reported their political ideology on a single-item scale (1 = extremely liberal to 9 = extremely conservative), and then evaluated either an attractive or an unattractive orange (from prior experiments). A regression analysis revealed a significant effect of product ($p < .001$): participants evaluated the superior product more positively than the inferior product. Importantly, there was a significant ideology × product type interaction ($p = .040$). Conservatives evaluated the inferior product more positively than liberals ($p = .031$). However, there was no difference in conservatives' vs. liberals' evaluations of the superior product ($p = .450$).

Experiment 4 ($n = 288$) tested whether pre-emptively affirming conservatives' need for balance would attenuate the effect of political ideology on preferences for an inferior product. Participants first indicated their political ideology on a single-item scale. Afterwards, in the balance affirmation condition they wrote about two instances in their life that prompted them to think that things were in balance: that bad events are followed by good events and that good events are followed by bad events. Participants in the control condition did not engage in this task. Finally, participants saw an attractive and an unattractive orange and provided their relative evaluation (on the same scales as in experiments 1 and 2). There was a main effect of ideology ($p < .01$), which was qualified by a significant ideology × balance affirmation interaction ($p = .027$). Conservatives evaluated the inferior orange more positively than liberals ($p < .01$). However, when participants' sense of balance was affirmed, conservatives and liberals equally devalued the inferior orange ($p = .595$).

Experiment 5 ($n = 406$) examined whether providing justification for the product's inferiority (by highlighting the inferiority of the producer) would reverse conservatives' (vs. liberals') preferences for inferior products. Participants indicated their political ideology on a dichotomous scale and then saw an unattractive orange. Half of the participants were told that the farm growing the orange had inferior resources and therefore employed illegal immigrants, whereas the remaining half were not provided with such information. The results revealed a significant main effect of producer inferiority ($p < .01$) and an ideology × producer inferiority interaction ($p < .01$). In the control condition, conservatives evaluated the inferior product marginally significantly more positively than liberals ($p = .057$). However, when the producer's inferiority was highlighted, liberals evaluated the inferior orange more positively than conservatives ($p = .035$). Importantly, these results were significant regardless of whether or not we controlled for participants' baseline attitudes toward illegal immigration.

These findings provide converging evidence for political ideology as an important driver of preferences for inferior products. More broadly, this research enhances the current understanding of how political ideology can drive non-ideological product preferences in unexpected ways, and it offers insights about the factors that can enhance the appeal of inferior products, which are often devalued and wasted.

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Earning Consumer Forgiveness through Service Recovery:
Roles of Emotion, Money, and Power

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EXTENDED ABSTRACT

In general, the negative effects of service failures can be eliminated only when consumers forgive the company (Fedorikhin, Park, and Thomson 2008). There are two main categories of service recovery strategies: economic recovery (e.g., monetary or other financial compensation) and emotional recovery (e.g., apologies and explanations) (Bitner, Booms, and Tetreault 1990). Specifically, economic recovery provides consumers with tangible compensation for their loss, while apologies are regarded as the most potent factor under the offender's control that could lead to forgiveness by the offended party (Fehr and Gelfand 2010).

Obviously, the process of consumer forgiveness is the negotiation between the company and consumers. Mounting evidence demonstrated that an individual's current power position can influence various psychological process, such as negotiation and consumption (Dubois, Rucker, and Galinsky 2010; Rucker, Galinsky, and Dubois 2012). To this end, the present proposes that consumers' power state moderates service recovery strategies on consumer forgiveness. Although power has two core features—hierarchical and social (Rucker, Hu, and Galinsky 2014), both of which are applicable to service encounters and recoveries, to our knowledge power has not been examined in the service recovery research. We postulate that the effectiveness of the service recovery strategies is dependent on the consumer's power state. That is, consumers with high power, who have greater resources at their disposal, would have different expectations in terms of the firm's service recovery relative to their low-power counterparts.

Prior research shows that injured parties are more inclined to forgive brands' transgressions following receipt of an apology (i.e., emotional recovery) (Riek and DeWit 2018). In psychological research, sincere apologies are regarded as the most potent factor under the offender's control to obtain forgiveness from the victim (Fehr and Gelfand 2010). Monetary incentives are shown to be less effective than apologies in making buyers withdraw their negative feedback on eBay (Abeler et al. 2010). Other researchers suggest that offering economic compensation may simply increase overhead costs for companies, while not enhancing consumer satisfaction (Hocutt, Bowers, and Donavan 2006). Based on this discussion, we hypothesize that:

Hypothesis 1   *Following a service failure, consumers receiving emotional recovery will show greater forgiveness intention than those receiving economic recovery.*

Past research demonstrated the mediating role of empathy in the relationship between apologies and forgiveness in interpersonal relationships (Fehr, Gelfand, and Nag 2010), and economic compensation can lead consumers to perceive the company as benevolent (Xie and Peng 2009). Mass evidence demonstrated that benevolent is positively related to empathy (Carmody and Gordon 2011), and marital quality research showed that benevolence can predict empathy (Paleari, Regalia, and Fincham 2005). Thus, we hypothesize that:

Hypothesis 2   *Emotional and economic recovery strategies can elicit consumers' forgiveness through consumers' empathy toward the company.*

For high-power individuals, reminders of fairness can increase their prosocial orientations, which include forgiving others (Guinote 2017). Given high-power consumers' greater sensitivity to fairness, we propose that fair solutions are important goals for them in service recovery. When perceived fairness is high, they reciprocate by showing empathy and forgiveness toward the company. Thus, we propose that:

Hypothesis 3a   *When offered service recovery, high-power consumers show forgiveness intention through the serial mediation of perceived fairness and empathy toward the company.*

Guinote (2017) identifies the link between low power and communal orientation, and emotional recovery may convey warmth. At the same time, lacking power makes one feel doubtful and uncertain (Anderson and Galinsky 2006). Compared to emotional recovery, economic recovery is more certain and tangible, and low-power consumers would be less concerned about perceived fairness. Thus, we propose that:

Hypothesis 3b   *When offered service recovery, low-power consumers show forgiveness intention through empathy toward the company.*

To address these questions, we systematically investigate the effects of service recovery strategies on consumer forgiveness across diverse service contexts (i.e., restaurant, airline, hotel reservation, and online shopping) with four studies.

We first demonstrated the main effect of service recovery strategies on forgiveness intentions in a lab study (Study 1a) and a field study (Study 1b). Study 1a tests the simple effect and show that an emotional recovery strategy can lead to greater consumer forgiveness for a given service failure than an economic compensation. We show that the effect of service recovery on consumers' forgiveness is mediated by empathy. There is no differential impact on consumer forgiveness whether the economic compensation is more or less generous. In study 1b, conducted in a fast food restaurant as a field experiment, we show that emotional recovery is more effective in eliciting consumer forgiveness than economic recovery. Study 2 recruited participants from MTurk with the context of airline delay, and show that effects of service recovery strategies on consumers' forgiveness have differential routes for high-power and low-power consumers. For consumers with high power, the effect is mediated sequentially by fairness perception and empathy. In contrast, low-power consumers are less concerned about fairness and exhibit forgiveness through empathy toward the company. Study 3 followed Study 2 and replicated the results shown in Study 2 with the online store context.

Our findings contribute to several streams of research. Most notably, we contribute to the service recovery literature by distinguishing the differential effects of emotional recovery and economic compensation. We examine the interaction effects of service recovery strategies and power on consumer forgiveness and fill the theoretical gap in this overlooked area. We examine the underlying mechanisms of empathy toward the company and fairness perceptions. This broader perspective not only enhances the current understanding of consumers' forgiveness processes but also provides significant implications for companies to handle service failure situations.

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The Differential Impact of Group Entitativity on Donation of Time Versus Money

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EXTENDED ABSTRACT

Literature has demonstrated a stronger effect of an identifiable single victim in visual advertisements over a large number of victims (e.g., Kogut and Ritov 2005). There are a limited number of studies proposing entitativity as an important criterion to increase donation in the group setting (Smith, Faro, and Burson 2013). Smith et al. (2013) indicate that group entitativity of multiple victims leads to favorable (unfavorable) judgments of victims with positive (negative) traits and greater (fewer) donations. Based on the theories of entitativity (Campbell 1958), a more entitative group of victims is judged similarly as a single individual victim (Hamilton and Sherman 1996). Following Smith et al.'s (2013) work, the current study investigates the effect of group entitativity on different types of donations (time versus money). This study proposes that increased group entitativity among a large number of victims has a differential impact on the two types of donations; specifically that high group entitativity, compared with low group entitativity, is more effective in soliciting donation of time whereas low group entitativity is more effective in attracting donation of money than high group entitativity.

THEORETICAL DEVELOPMENT

This proposition is drawn from the theoretical differences between time and money. Time activates emotional attachments whereas money activates rational economic utility (Liu and Aaker 2008). It follows that donors' mindsets associated with donation of time increase the tendency to contribute to a group of victims. Spending the entire time with one entitative group of individuals rather than incrementally with different groups of individuals would generate greater emotional well-being for donors. In the high group entitativity condition, donors evoke more emotional concerns, achieve stronger emotional well-being, and elicit greater donations of time. Utilitarian mindsets activated by donation of money lead donors to maximize monetary donation efforts toward a variety of different victims over a single unit of victims. High-entitative groups of victims would reduce donors' utilitarian values, weaken their cognitive well-being, and result in fewer monetary donations.

STUDY DESIGN

These propositions were examined in three studies. To prime group entitativity, we adopt a conceptual manipulation of social associations (same versus different neighborhood) in study 1, a perceptual manipulation (uniform) in study 2, and measures of physical similarities such as body gesture and facial expressions in study 3.

Study 1 used a 2 (group entitativity: low versus high) X 2 (donation types: time versus money) mixed factorial design. We randomly assigned 106 undergraduate students to one of the two entitativity conditions and asked them to report both their intent of monetary and time donations. Participants in the high-entitativity condition donate more time (M_{high} = 3.80 times, M_{low} = 3.10 times; $F (1, 104)$ = 4.14, $p < .05$) but less money (M_{high} = \$27.96, M_{low} = \$39.43; $F (1, 104)$ = 4.65, $p < .05$) than those in the low-entitativity condition. Findings of the first study provided initial support for the effects of group entitativity on two different types of donations such that increased group entitativity among victims enhances donation of time but reduces donation of money.

In study 2, 184 undergraduate students took part in the study and indicated the amount of time and the amount of money they would pledge. The findings replicated those in Study 1, yielding a differential effect of entitativity on donation of time ($F (1, 182)$ = 7.08, $p < .01$) and donation of money ($F (1, 182)$ = 8.92, $p < .01$). In addition, we tested the mediating role of donors' emotional versus cognitive well-being associated with time or money. Consistent with the theorizing, emotional well-being mediates the impact of entitativity on donation of time (indirect effect = .23; 95% CI: [.0168, .5307]), whereas cognitive well-being mediates the effect of entitativity on donation of money (indirect effect = -1.79; 95% CI: [-4.8801, -.2405]).

Study 3 extended the results to an online field setting and examined the effect of group entitativity on actual donations. Data of 192 projects that contained pictures of fundraising groups were collected from one of the crowdfunding websites for individuals. Entitativity was then measured through body gesture and facial expression of the pictures. As predicted, donors were less likely to contribute monetarily to high (versus low) entitative groups. Specifically, when the fundraiser posted a picture of a high entitative group showing the same body gesture (versus a low entitative group holding different body gestures), the results of ANCOVA (controlling for age, gender, skin color, social membership, and uniform) revealed that the total amount decreased significantly (M_{high} = \$1383.37, M_{low} = \$6537.22; $F (1, 185)$ = 4.81, $p < .05$). On the other hand, high (versus low) group entitativity positively affected prosocial sharing behavior on social media (a proxy of donation of time). ANCOVA on sharing behaviors was conducted, showing that compared to a low entitative group (with different body gestures), a high entitative group (with the same body gesture) is likely to receive more shares (M_{high} = 3800.09, M_{low} = 415.60; $F (1, 185)$ = 9.46, $p < .01$).

CONCLUSION

This paper contributes to the literature on donation and sheds light on the effect of group entitativity, which is shown to have differential effects on prosocial behavior depending on the type of donations. Moreover, our findings should be applicable across various fundraising platforms involving traditional (e.g., mail, telephone, and billboard) and contemporary methods (e.g., website, and social media).

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When Do Consumers Dispose of Possessions that Matter the Most?
The Role of Inauthenticity

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EXTENDED ABSTRACT

Of late, marketing has seen a growing interest in the concept of authenticity. That literature has focused primarily on brand authenticity and the appeal of authentic brands to consumers (Morhart et al., 2015). The present research, in contrast, focuses on consumer authenticity and the effect of people behaving authentically or inauthentically on consumption-related behavior. This is an important issue to address because inauthentic behavior is a common occurrence as we navigate our daily lives. When tell a lie or cheat, express emotions that we do not genuinely feel, or conform our behaviors in an attempt to fit in, we are acting inconsistently with our true thoughts and feelings; we are being untrue to ourselves. In these situations, it is easy to feel distant from and out of touch with our sense of who we are (Wood et al. 2008), and research in psychology, particularly clinical and personality psychology, has established that inauthenticity comes with a cost. People who are chronically inauthentic tend to experience low self-esteem, stress, anxiety, maladaptation to new environments, and negative self-perceptions (Gino et al. 2010; Gino et al. 2015; Lenton et al. 2013; Lenton et al. 2016; Lopez & Rice 2006; Sheldon et al. 1997; Wood et al. 2008).

While the psychology literature demonstrates that inauthenticity negatively affects how people relate to and feel about themselves, how people relate to their external world is less understood. Indeed, the very premise that authenticity could have effects beyond the self requires one to adopt a definition of the self that can encompass aspects of the external world. Theories of this sort are quite prolific in marketing and rest on the assumption that people construct their self-concept based both on internal inputs (i.e., thoughts, feelings and behaviors) and external inputs (i.e., possessions, places, people; Belk 1988; James 1890). Because external inputs, such as possessions, can be incorporated into consumers' self-concept, consumers then use the self as a reference to evaluate these possessions (Perkins and Forehand 2011; Weiss and Johar 2013). Thus, from a marketing perspective, self-authenticity is an important phenomenon to understand because, we argue, it may affect how consumers relate to and treat their possessions. Specifically, because inauthenticity is characterized by feeling disconnected from oneself, inauthenticity also should be associated with feeling disconnected from possessions that are part of the self, i.e., self-relevant possessions. When consumers feel disconnected from their self-relevant possessions, we predict that they should become more likely to dispose of these possessions. Five studies test this prediction.

Study 1 demonstrates a positive correlation between chronic inauthenticity and frequencies to replace electronics ($\beta=.97$, $p<.001$), trash apparel ($\beta=.65$, $p<.001$), and purchase new apparel($\beta=31$, $p=.006$). Inauthenticity interacts with the self-relevance of these products (trash apparel: $\beta=.49$, $p<.001$; replace electronics: $\beta=.38$, $p=.01$; purchase new apparel: $\beta=.22$, $p=.04$), with the relationship between inauthenticity and the frequencies to replace/trash/purchase being stronger when the possessions are highly self-relevant. Moreover, the effect on purchase of new products was mediated by the tendency to trash old products (95% CI=[.09, .36]). Thus, inauthenticity increases disposal of self-relevant possessions and, indirectly, increases purchase of new products.

In study 2, we manipulate inauthenticity (vs. authenticity, vs. control). Participants described a situation wherein they were not be-

ing themselves (vs. being themselves, vs. morning routine). Then, they decided whether to repair or replace a broken smartphone, which was pretested to be highly self-relevant, and reported how connected they felt both to their own phone and to a phone in the store (adapted from Aron et al. 1992). Regarding their own phone, the inauthentic condition ($M=4.10$) felt less connected than the control ($M=4.46$, $p=.04$) or authentic ($M=4.49$, $p=.03$) conditions, which did not differ ($p>.8$). Regarding a phone in the store, no differences emerged (all $ps>.8$). Thus, inauthenticity affects self-relevant possessions (own phone), but not self-irrelevant products (a phone in the store). Moreover, the inauthentic condition ($M=66.41$) was less likely to repair their phones than the control condition ($M=73.49$, $p=.07$), and directionally, the authentic condition ($M=70.63$, $p=.29$). Connection to one's phone mediated the effect of decision to repair the phone (inauthentic vs. control 95% CI=[.22, 3.32]; inauthentic vs. true-self 95% CI=[.23, 3.39]). Thus, inauthenticity decreases consumers' connection to their phone, which increases their desire to replace (vs. repair) it.

Study 3 provides a better test of the moderation of possession self-relevance, by holding constant the product category (photos of places) while varying the self-relevance of the individual photo (by varying the self-relevance of the place in it). Participants completed the same inauthentic vs. control writing task as study 2. Then, they received photos of 20 places on campus and were asked to delete any photos they wished to make a collage for the campus. Five of these places were pretested to be relevant to students' self-concept. For the inauthentic (vs. control) condition, a greater percentage of the deleted photos were of self-relevant places ($M_{\text{inauthentic}}=14.3\%$, $M_{\text{control}}=8.6\%$, $p=.02$). Moreover, the inauthentic (vs. control) condition deleted a greater percentage of photos of self-relevant places ($M_{\text{inauthentic}}=14.4\%$, $M_{\text{control}}=10.4\%$, $p=.1$), but not of self-irrelevant places ($M_{\text{inauthentic}}=27.8\%$, $M_{\text{control}}=32.5\%$, $p>.2$). Thus, inauthenticity increases consumers' tendency to digitally trash photos of places that are self-relevant.

Studies 4 and 5 test the silver-lining of inauthenticity: should the disposal context provide the opportunity, would inauthenticity increase sustainable disposal behavior, such as donation and possession exchange? In study 4, in a Spring-Cleaning context, those in the inauthentic (vs. control) condition was less likely to keep their clothes ($M_{\text{inauthentic}}=54.86\%$, $M_{\text{control}}=64.35\%$, $p<.001$). But importantly, they were also more likely to dispose of their clothes by donating them ($M_{\text{inauthentic}}=31.80\%$, $M_{\text{control}}=24.82\%$, $p=.004$; for trashing: $M_{\text{inauthentic}}=13.34\%$, $M_{\text{control}}=10.84\%$, $p=.15$). In study 5, in a realistic online Clothing Exchange context, those in the inauthentic (vs. authentic) condition were more likely to resell their used t-shirts ($M_{\text{inauthentic}}=32.5\%$, $M_{\text{control}}=42.5\%$, $p=.08$) to others. Thus, inauthenticity can increase sustainable consumption behavior such as possession donation and exchange.

In sum, inauthenticity influences consumers' decisions to replace, trash, donate and sell their possessions. These findings contribute to the authenticity literature by demonstrating unanticipated consequences of inauthenticity, which have implications for consumers' welfare and the environment.

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Knowing What You Like Makes Me Like You More:
Consumer Attitudes and Social Perceptions

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EXTENDED ABSTRACT

People often communicate their consumer attitudes in social settings. For example, when dining with new colleagues, a person might reveal his likes (e.g., "I like red wine"), dislikes (e.g., "I don't like white wine"), or neutral attitudes (e.g., "I have no preference for wine"). How might these attitudes differentially influence how well-liked he is by his colleagues?

This research explores how consumers' attitudes toward brands and products influence how they are perceived by others. We hypothesized that people with valenced consumer attitudes (i.e., liking and/or disliking brands and products) are more likable than people with neutral attitudes (i.e., neither liking nor disliking). Because the capacity to experience pain and pleasure is an essential component of human nature (Gray, Gray, and Wegner 2007), we hypothesized that the effect is driven by the dehumanization of consumers with neutral attitudes. Finally, we predicted that the effect would be attenuated when attitudes are held for utilitarian (vs. hedonic) products.

Study 1 analyzed data from Yelp.com ($N = 669,096$) to test the main hypothesis that consumers who express valenced (*vs.* neutral) attitudes are better liked. The independent variable was the average of all ratings the user had assigned on Yelp (1-5 stars) and the dependent variable was the number of friends the user had on Yelp. We also controlled for user's review count, the length of time the user had been a Yelp user, and the standard deviation of the user's ratings. We predicted that users who expressed more valenced attitudes (i.e., had higher or lower average ratings) would have more friends than those who expressed neutral attitudes (i.e., had personal averages close to three stars). A quadratic regression found that both higher and lower average star ratings (i.e. positive and negative deviations from the turning point) were correlated with a greater number of friends. Those with fewest friends had average ratings of 2.7, close to the scale's midpoint.

Study 2 experimentally manipulated attitude valence to establish a causal relationship. In a three-cell between-subjects study, participants ($N = 210$) listened to sample music clips, and then chatted online with another participant (a confederate) who was ostensibly taking the same study in the lab at another campus of the same university. During their conversation, the confederate expressed that s/he had liked all of the stimuli, disliked all of the stimuli, or had not particularly liked or disliked any of them (i.e., was neutral), depending on condition. Next, participants were told that the study had another part in which they might interact with another participant again. They chose between continuing with their current partner or having the computer program assign them a new partner. They also rated how much they liked their current partner (3 items, $\alpha = .87$).

When the confederate expressed liking ($X^2(1) = 15.25$, $p <.01$) or disliking attitudes ($X^2(1) = 7.48$, $p <.01$), s/he was chosen more often as a future interaction partner than when s/he expressed neutral attitudes. Similarly, the confederate was perceived as more likable after expressing liking ($M = 4.71$, $t(137) = 3.89$, $p < .01$) and disliking attitudes ($M = 4.40$, $t(170) = 2.21$, $p = .07$), compared to after expressing neutral attitudes ($M = 4.07$).

Study 3 examined the mediating role of dehumanization. In this three-cell between-subjects study, participants ($N = 404$) imagined they had joined a tour group that visited a local drink factory where all travelers sampled several sodas. Participants then imagined they were talking with another traveler who expressed either a liking, disliking, or neutral attitude about the sodas. Participants rated the other person's likability and their perceived dehumanization (e.g., the person's capability of "experiencing pain" and "doing things on purpose"; 4 items, $\alpha = .84$; Kozak, Marsh, and Wegner 2006). The person with liking attitudes ($M = 5.56$) was better liked than the person with disliking attitudes ($M = 4.68$, $t(271) = 6.60$, $p < .01$), who was better liked than the person with neutral attitudes ($M = 4.28$, $t(267) = 2.82$, $p < .01$). Moreover, the differences between neutral versus liking attitudes and neutral versus disliking attitudes were both mediated by dehumanization perceptions (95% CI_{liking} [.12, .59]; 95% $CI_{disliking}$ [.52, .07]).

Study 4 tested whether the effect of consumer attitudes on social perceptions would be attenuated for attitudes in utilitarian product domains using a 2 between (domain: hedonic, utilitarian) × 3 within (attitude: highly-valenced, narrowly-valenced, neutral) mixed design. Participants ($N = 150$) rated how much they would like three different people based on their attitudes towards 50 clothing brands, celebrities, and music (hedonic) or 50 grocery products, such as detergent and batteries (utilitarian). The person with broadly-valenced (*vs.* narrowly-valenced *vs.* neutral) attitudes liked or disliked 80% (*vs.* 20% *vs.* 0%) of the 50 things and was neutral towards the remaining 20% (*vs.* 80% *vs.* 100%). All participants rated the likability of three attitude profiles in random order.

A mixed ANOVA revealed a significant main effect of attitude ($F(2, 148) = 60.62$, $p < .01$) and interaction between product domain and attitude ($F(2, 296) = 3.11$, $p < .05$), but no effect of product domain ($F(1, 148) = 1.55$, $p > 0.2$). Specifically, the two people with valenced attitudes ($M = 4.22$) were more likable than the person with a neutral attitude ($M = 3.44$; $F(1, 148) = 100.23$, $p < .01$). For utilitarian (vs. hedonic) products, the main effect of attitude was attenuated, although the effect still held for utilitarian products ($F(2, 73) = 17.93$, $p < .01$). Within the neutral condition, a between-subjects contrast showed that the person with neutral attitudes for hedonic (*vs.* utilitarian) products was liked less ($F(1, 149) = 4.80$, $p < .03$). Finally, the person with broadly-valenced attitudes ($M = 4.74$) was more likable than the person with narrowly-valenced attitudes ($M = 4.10$; $F(1, 148) = 27.06$, $p < .01$).

Overall, this research shows that people with valenced consumer attitudes are better-liked than those with neutral attitudes. The effect is mediated by perceptions of dehumanization and stronger for consumer attitudes in hedonic product domains.

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"It Can (Cannot) Be Mine:"
How a Person in a Photo Impacts the Perceived Ownability of a New Experiential Product

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EXTENDED ABSTRACT

Consumers often post photos of their extraordinary experiences on social media. Examining the photos of fifty-six national parks of the U.S. on TripAdvisor (the other two national parks had no review page on TripAdvisor) reveals that 10% of these photos include at least one person in them (by February 8, 2019). Perusing the cover photos of wedding venues on The Knot, a wedding planning website, indicates that the majority of photos include a couple in them (by March 6, 2019). This brings up an interesting and managerially important question: Does including a person in the photo of a new experiential product impact the viewer's perception of the product? Note that "new" here means new to the viewer.

Recent work on territorial responses finds that consumers are prone to perceptions of infringement when they infer that another individual feels ownership of a target that they also feel ownership of (Kirk, Peck and Swain 2018). Moreover, consumers infer others' psychological ownership when others exhibit antecedent conditions of psychological ownership: control over the target, investment of self into the target, and intimate knowledge about the target (Kirk et al. 2018; Pierce and Jussila 2011). These findings suggest that a photo showing a person investing him/herself in an experiential product may lead the viewer to infer that the person in the photo feels ownership over the product. This inferred psychological ownership of another individual may decrease the viewer's feeling that this product "can be mine." In this research, we use "ownability" to describe the consumer's feeling that something "can be mine." This leads to our first hypothesis:

Hypothesis 1   *Compared to including no person in the photo of an experiential product, including a person in the photo is likely to hurt the viewer's perceived ownability of the experiential product.*

We further propose that whether the person in the photo is identifiable will make a difference. In this research, we operationalize "identifiable" such that the person in the photo is facing towards the viewer with a clear frontal view. An "unidentifiable" person is a person facing away from the viewer without a clear frontal view. To the best of our knowledge, there has been no consumer research examining how the identifiability of the person in a photo impacts the viewer's perceived ownability of the place in the photo. However, there is some evidence from role-playing game design suggesting that the identifiability of a player's character in a game might impact the player's perceived ownability of what he/she wants in the game. Particularly, under the third-person view, the three most popular role-playing games in the world ("Lordran," "World of Warcraft," "The Elder Scrolls") all have the character that the player is playing face away from the player and have the character that the player is talking to or playing against face towards the player. We expect that one reason for this design may be that having the player's character face away (rather than face towards the player) helps with the player's sense of presence in the game world (Ravaja et al 2004), which we conjecture leads to the player's feeling that whatever is desirable in the game (e.g., the good, the victory) "can be mine." This leads to our second hypothesis:

Hypothesis 2   *The effect proposed in Hypothesis 1 will vanish or even reverse if the person in the photo is facing away from the view rather than facing towards the viewer. Specifically, compared to including no person in the photo of an experiential product, including a person facing away from the viewer is likely to enhance the viewer's perceived ownability of the experiential product.*

Finally, based on prior research on anticipated emotions and anticipatory ownership, we propose that perceived ownability, i.e., the feeling that something "can be mine," can have a similar effect to real ownership (Ariely and Simonson 2003; Mellers and McGraw 2001; Shu and Peck 2011). For example, Ariely and Simonson (2003) suggest that anticipatory ownership can have similar psychological effects to legal ownership, even when the individual does not have legal possession of the object. Mellers and McGraw (2001) demonstrate that anticipated pleasure impacts consumer choices in a similar way to real pleasure. Therefore, we propose the following hypothesis:

Hypothesis 3   *The more (less) ownable a consumer feels an experiential product is, the greater (less) the attitude toward the product and the interest in the product.*

To test the hypotheses, we have run three studies with two different experiential products – wedding venues and vacation destinations.

STUDY 1: JOINT EVALUATION OF WEDDING VENUES WITHOUT/WITH A WEDDING COUPLE

Method

Study 1 tested Hypotheses 1 and 3 with a within-subject design. Ninety-nine participants (34% female; mean age = 35.87) recruited from Mechanical Turk completed this study for a nominal payment. All participants were instructed to imagine that they were planning their wedding ceremony and needed to choose a wedding venue. Participants then rated two different wedding venues at a time for a total of twelve times on the following metrics (all on a 7-point scale): 1) a four-item measure of perceived ownability of the wedding venue with items such as "I feel like this could be my wedding venue," 2) a three-item attitude towards the wedding venue with items such as "I like this wedding venue," 3) a three-item scale of further interest in the wedding venue with items such as "I would likely search for more information about this wedding venue," and 4) a three-item measure of psychological ownership of others over the wedding venue with items such as "I feel like someone else has a very high degree of personal ownership of this wedding venue." The measure of perceived ownability and the measure of inferred psychological ownership of others were adapted from Peck and Shu (2009). For each pair that was rated, one wedding venue was presented without any wedding couple in the photo and the other wedding venue was presented with a wedding couple in the photo. In the condition where the photo included a couple, the couple was facing towards the

viewer with a clear frontal view. All of the wedding venues (without any people in the photo) and all of the wedding couples (without any background in the photo) used in this study were pretested and were equally attractive. The left-right order of the two photos were counterbalanced between participants. The results indicated no statistical difference due to the left-right order. Thus, counter-balanced data were aggregated in the following analysis.

Results

The items measuring perceived ownability, attitude, further interest, and psychological ownership of others all had high internal validity (all alphas > .90) and thus were aggregated in further analysis. Because this study adopted a within-subject design and participants in this study viewed each wedding venue only once, we followed the methods of Judd et al. (2001) in data analysis. Results of fixed effect analysis indicated that, compared to including no couple in the photo, including a couple in the photo lowered the viewer's perceived ownability of the wedding venue (B = -.28, SE = .08; p < .01), lowered the viewer's attitude towards the wedding venue (B = -.30, SE = .07; p < .01), lowered the viewer's interest in the wedding venue (B = -.35, SE = .08; p < .01), and heightened the inferred psychological ownership of others over the wedding venue (B = .26, SE = .10; p = .01). Results of mediation analysis indicated that the perceived ownability mediated the effect of including a couple in the photo on the viewer's attitude towards the venue (B = .91, SE = .02; *p* < .01), and mediated the effect of including a couple in the photo on the viewer's interest in the venue (B = .99, SE = .02; *p* < .01). Moreover, inferred psychological ownership of others over the wedding venue mediated the effect of including a couple in the photo on the perceived ownability of the wedding venue (B = -.31, SE = .07; *p* < .01).

These results provided initial evidence for our hypotheses, showing that including a couple in the photo of a wedding venue led to the viewer's inference that the couple in the photo felt ownership over the wedding venue. This inferred psychological ownership of others hurt the viewer's perceived ownability of the wedding venue (Hypothesis 1) which in turn lowered the viewer's attitude toward the wedding venue and interest in the wedding venue (Hypothesis 3).

STUDY 2: SEPARATE EVALUATION OF A WEDDING VENUE WITHOUT/WITH ONE/WITH FOUR COUPLE(S)

Study 2 served two purposes. First, it tested Hypotheses 1 and 3 with a between-subject design. Second, it tested whether the number of people in the photo would make a difference.

Method

Four hundred and seventy-two undergraduate students (43% female; mean age = 19.69) at a Midwestern university participated in this study for extra credit. All participants were instructed to imagine that they were planning their wedding ceremony and needed to choose a wedding venue. Then participants were randomly assigned to one of the three conditions: rating a venue without a wedding couple in the photo, rating a venue with one wedding couple in the photo, rating a venue with four different wedding couples in the photo. All participants rated the venue on the following metrics: perceived ownability of the venue, attitude towards the venue, further interest in the venue and word of mouth for the venue.

Results

Results of one-way ANOVA indicated that, overall, the number of couples included in the photo of a wedding venue had a significant main effect on the perceived ownability of the venue (B = -.20, SE = .08; p < .05), on the attitude towards the venue (B = -.40, SE = .08; p < .01), on the interest in the venue (B = -.27, SE = .09; p < .01), and on the word of mouth for the wedding venue (B = -.24, SE = .08; p < .01). However, the main effect was driven by the presence of *any* couple in the photo, not by how many couples were present. Specifically, compared to including no couple in the photo, including one couple lowered the viewer's perceived ownability of the venue (B = -.40, SE = .16; p < .05), lowered the viewer's attitude towards the venue (B = -.68, SE = .15; p < .01), lowered the viewer's interest in the venue (B = -.56, SE = .18; p < .05), and lowered the viewer's word of mouth for the venue (B = -.55, SE = .17; p < .01). However, compared to including one couple in the photo, including four couples made no difference on the viewer's perceived ownability of the venue (B = .02, SE = .17; p = .94), attitude towards the venue (B = -.11, SE = .16; p = .48), interest in the venue (B = .02, SE = .19; p = .90), or word of mouth for the venue (B = .09, SE = .17; p = .61).

In summary, Study 2 replicated the findings on Study 1 with a between-subject design and found the same effect on word of mouth as on attitude toward and interest in the target product. This study also showed that the number of persons in the photo made no difference.

STUDY 3: SEPARATE EVALUATION OF A VACATION DESTINATION WITHOUT/WITH A TOURIST

Study 3 served two purposes. First, it tested Hypotheses 2 and 3 with a between-subject design. Second, it adopted a different stimulus from previous studies.

Method

Three hundred and thirty undergraduate students (42% female; mean age = 19.65) at a Midwestern university participated in this study for extra credit. All participants were instructed to imagine that they were planning a spring break vacation and wanted to choose a vacation destination. Participants were randomly assigned to one of two conditions: participants saw a photo of a beach destination with no tourist in the photo or participants saw a photo of the same beach destination with a tourist in the photo. In the condition where the photo included a tourist, the tourist was facing away from the viewer without a clear frontal view. All participants rated the beach destination on the following metrics: perceived ownability of the destination, attitude towards the destination, further interest in the destination, and inferred psychological ownership of others over the destination.

Results

Compared to including no person in the photo of a vacation destination, including a person facing away from the viewer increased the viewer's perceived ownability of this destination (B = .43, SE = .18; t(301) = 2.39, p < .05), increased the viewer's attitude towards this destination (B = .91, SE = .17; t(301) = 5.41, p < .01), and increased the viewer's interest in this destination (B = .66, SE = .18; t(301) = 3.66, p < .01). However, the viewer did not infer other's psychological ownership over the destination when the photo included a person facing away from the viewer (B = .01, SE = .18; t(301) = .08, p = .94). Moreover, results of bootstrapping analysis indicate that perceived ownability mediated the effect of the person who was facing away from the camera on the viewer's attitude towards the destination (B = .23; CI = [.04, .43]) and mediated the effect of the person who was facing away from the camera on the viewer's interest in this destination (B = .24; CI = [.04, .45]).

These results supported our Hypothesis 2 that when the person in the photo is facing away and not identifiable, the effect proposed in Hypothesis 1 disappears or even reverses. We expect that when the person in the photo is facing away, the viewer tends to get a sense of presence at the destination, which in turn enhanced the perceived ownability of the destination in the photo.

GENERAL DISCUSSION

Prior research shows that the identifiability of a victim impacts the viewer's willingness to help (Jenni and Loewenstein 1997). However, our work is the first to examine the effect of the identifiability of the person in a photo on the viewer's perceived ownership of the experiential product in the photo. We believe this work has important managerial implications. Specifically, our findings suggest that for experiential venues, advertisers should post photos with either no person or, to be even more effective, a person facing away from the viewer.

One limitation of our current work is that we have not compared the following conditions all in one study: the photo does not include a person in it, the photo includes a person facing towards the camera, or the photo includes a person facing away from the camera. In a new study, we will include all the above three conditions and explicitly test how the viewer's sense of self varies across conditions and whether the viewer's sense of self impacts the viewer's perceived ownability of the experiential product in the photo.

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Achieving Immersion: The Role of Autonomy, Temporal Dissociation, and Reactance

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EXTENDED ABSTRACT

With consumers seeking memorable experiences, a concept of potential interest lies in immersion (Hansen and Mossberg 2013), a psychological state in which consumers are fully engrossed in the environment and absorbed in their activities (Novak, Hoffman, and Yung 2000). However, the conditions under which such immersion arises and contributes to satisfaction (Hansen and Mossberg 2013) remain underexamined. We propose that the autonomy perceived during the experience affects consumers propensity to immerse themselves and their satisfaction. Further, relying on the temporal processing (Block 1990) literature, we propose temporal dissociation as the mechanism that explains why immersion increases satisfaction.

To test these predictions, Study1 was a field study that took place in an experience-centric wine museum (La Cité du Vin, Bordeaux, France). The museum is a thematic open space that provides a good balance of physical and mental activities along the visitor journey, making it conducive to immersive experiences (Carù and Cova 2007). Customers (*N*=384, 53% women, M_{Age}=47.15) were asked at the entrance of the museum if they wanted to participate in a study about their experience, and those who agreed were invited to answer a questionnaire when leaving the museum. Satisfaction was assessed using a three-item scale (Machleit, Kellaris and Eroglu 1994, α=.85), and temporal dissociation and immersion were measured with respectively three and two items (Agarwal and Karahanna 2000, $α_{Dissociation}$=.70; $α_{Immersion}$=.80). Autonomy was measured using two items (Song and Zinkhan 2008; α=.73). All the statements were rated on 10-point Likert scales (1=Strongly disagree, 10=Strongly agree). Results revealed a significant indirect effect of autonomy on temporal dissociation (β=.07, 95% CI=.039; .114). Specifically, autonomy had a positive effect on immersion (β=.25, *p*<.001), which then increased temporal dissociation (β=.29, *p*<.001). A serial mediation analysis revealed a significant serial mediation (β=.12, 95% CI=.004; .022), supporting the prediction that immersion and temporal dissociation serially mediate the effect of autonomy on satisfaction. Both immersion (β=.47, *p*<.001) and temporal dissociation (β=.15, *p*<.001) had a positive effect on satisfaction. Study 1 thus supports the notion that consumers who feel they can freely choose how to behave report greater feelings of immersion, and because they are more immersed in the experience, they exhibit greater loss of track of time and their satisfaction in turn increases.

However, one may wonder if some consumers may react more positively to autonomy. In this regard, reactance theory assumes that individuals cherish their ability to choose from among alternatives such that whenever an alternative is threatened or eliminated, reactance occurs, and the motivation to pursue the restricted freedom increases dramatically (Brehm 1966). Nevertheless, individuals vary in trait reactance, and differ in how much they value their freedom of choice and react negatively when such freedom is threatened. We posit that reactance moderates the effects of autonomy, such that greater temporal dissociation emerges as a response to autonomy for people with a high level of reactance.

Hence, in study 2, participants (N=375, 55.5% female, M_{Age}=42.88, SD=9.62) participated in an online scenario-based experiment that manipulated autonomy as a between-subjects factor (low vs. high). In both the low and high autonomy conditions, the respondents were asked to read a scenario about visiting a zoo and to carefully inspect a map of the zoo. In the low-autonomy condition the scenario constrained individual choice, as participants were told they had to follow a compulsory path that they could not deviate from. In the high-autonomy condition, the scenario did not mention any compulsory path. Then they completed the reactance scale (Hong and Faedda 1996, α=.77) and the same measures as in Study 1. Results revealed a similar pattern as in study 1, with a significant difference of immersion across autonomy conditions (M_{High}=5.04, M_{Low}=4.73, p<.01), and a significant indirect effect of autonomy on temporal dissociation (95% CI=.049; .230), whereby autonomy has a positive effect on immersion (β=.31, p<.01), which then increases temporal dissociation (β=.41, p<.001). A significant serial mediation effect was also observed (95% CI=.030; .145), whereby the aforementioned positive effects of autonomy and immersion are followed by a positive effect of temporal dissociation on satisfaction (β=.60, p<.001). Finally, a floodlight analysis revealed a significant interaction between autonomy and reactance (β=.21, p<.05), supporting the prediction that highly reactant consumers experience greater temporal dissociation when autonomous (versus not).

This research demonstrates that consumers are more immersed and exhibit more satisfaction toward the experience when they are autonomous, and identifies temporal dissociation as the underlying mechanism for this effect. This research also identifies reactance as a boundary condition for the effects of autonomy on temporal dissociation.

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The Effect of Power Distance Belief on Variety Seeking

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EXTENDED ABSTRACT

Variety seeking has been studied for decades. However, the role played by culture on variety seeking has been largely ignored with examination largely focusing on one cultural variable, namely, individualism-collectivism (Kim and Drolet 2003). In this research, we consider a different cultural variable namely, power distance belief (PDB) and examine its effect on variety seeking behavior. We propose that high PDB consumers seek more variety than low PDB consumers and the relationship between PDB and variety seeking is mediated by boredom as high PDB consumers are more likely to experience boredom due to their sensitivity to rules and regulations.

Power distance belief (PDB) refers to the extent to which individuals expects and accepts inequality and hierarchy (Hofstede 2001). Compared with low PDB consumers, high PDB consumers may be more sensitive to rules and regulations. One major characteristic of high PDB cultures is that people believe everyone should have a 'defined' place within the social order (Winterich and Zhang 2014). To keep everyone in his/her defined place, rules are more widely used in the social life (Zhang et al. 2010). Rules and regulations on one hand help define and guide their behavior, but on the other hand, restrict and paralyze the agency from doing whatever they want. Compared with low PDB individuals, high PDB individuals need to restrain their urges and cannot do things that deviate from rules and regulations. This feeling that one can not do whatever she/he wants, or one must do whatever he/she does not want to do, is the major characteristic and central experience to the boredom (Eastwood et al. 2012; Elpidorou 2017).Thus, high (vs. low) PDB individuals are more likely to experience boredom because rules and regulations are more salient for them. Boredom is an aversive experience that is characterized as a state of low arousal. As people have the need to keep optimal level of stimulation, when the individual gets bored, he or she may have a strong desire to escape their current situations and to seek for something exciting and stimulating to achieve higher level of arousal. Variety seeking, as simply alternating between familiar choices will provide the stimulation that customers need, thus enable them to escape from the boredom (Steenkamp and Baumgartner 1992). Therefore, we predict that that variety seeking can help high PDB individual alleviate the boredom by provide adequate stimulation.

In study 1, We used nationality to operationalize PDB. 50 US participants and 46 Indian participants were recruited from Mturk. Participants were asked to imagine that they needed to choose ice cream as their afternoon treat for the next 10 days at their place of work. We provided 15 flavors that are common in both countries and participants were told that they could select as many or as few flavors as they would like. Variety seeking is measured as the number of unique flavors been chosen, ranging from 1 to 10. We also measured participants self-construal (Singelis 1994) to ensure our finding is independent from it. As we predicted, participants from India chose more unique flavors of chips compared with participants from US ($M_{India} = 8.73$ vs. $M_{US} = 7.62$; $p = .01$). And the result remained after we controlled for participants' self-construal ($F (1, 93) = 4.17$, $p = .04$), whereas self-construal did not significantly impact variety seeking ($p = .12$).

Study 2 ($N = 147$) aimed to explore boredom as the underlying mechanism. PDB was manipulated using a sentence-completion task (Zhang, Winterich and Mittal 2010). In the high (low) PDB condition, participant needed to complete 10 sentences related to social hierarchy (equality). Then, participants continued to complete a similar variety seeking task as in study 1. Participants were asked to choose make choices among 20 common candy brands for next 15 days. As in the study 1, variety seeking was measured by the unique candy brands been chosen, thus ranging from 1 to 15. At the end, we measured participants' boredom using 4 item adapted from Fahlman et al. (2013).We performed a bootstrap analysis (model 4, 5000 bootstraps) to test boredom's role as a mediator. The result indicated a significant indirect effect of participants' PDB on their variety seeking via the boredom ($b = .32$; 95% CI [.0433, .8640]. These results indicate that the effect of PDB prime on participants' variety seeking was mediated by the increased boredom.

In study 3, we aimed to directly manipulate the boredom level of participants ($N = 251$) to further illustrate boredom as the underlying mechanism. The study was a 2 (PDB prime: high vs. low) x 3 (boredom enhanced vs. reduced vs. control) between-subjects design. In the boredom enhanced (reduced) monotony condition, participants were asked to describe a study they completed recently that was extremely monotonous and repetitive (flexible and not at all monotonous). Participants in the control condition were just asked to describe a typical Mturk survey without information of repetition nor monotony. We measured variety seeking using the same candy choice task in study 2. There was a significant interaction effect between PDB and monotony ($F (1, 245) = 4.52$, $p = .01$). High PDB participants displayed the similar level of variety seeking when they were in the boredom enhanced condition compared those in the control condition ($M_{enhance} = 12.57$ vs. $M_{control} = 13.35$, $p = .18$). However, they significantly decreased variety seeking when they are in the boredom reduced condition ($M_{reduce} = 11.78$ vs. $M_{control} = 13.35$, $p = .02$). For low PDB participants, their variety seeking increased when they were in the high monotony condition as their boredom increased ($M_{enhance} = 13.33$ vs. $M_{control} = 11.51$, $p = .02$). However, their variety seeking kept similar when they were in the low monotony condition compared with the control condition. ($M_{reduce} = 12.63$, $p = .22$), as their boredom was already low.

Our findings offer contributions to the variety seeking literature by identifying an understudied cultural influencer: PDB. Further, by revealing boredom as the mechanism underlying the relationship between PDB and variety seeking that high PDB consumers seek more variety than low PDB consumers because of their propensity to boredom contributes to the literature of PDB by identifying a novel downstream effect.

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Charitable Maximizers:
The Impact of the Maximizing Mindset on Charitable Behavior

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EXTENDED ABSTRACT

The number of charitable organizations seeking donors' support is on the rise. Most of the donations these organizations rely on come from individual donors. In the U.S., individual contribution accounts for over 70% of all donations. As a result, individuals constantly receive donation requests. Past research has shown that when faced with many options, the decision maker's maximizing mindset is likely to be activated (Levav, Reinholtz, and Lin 2012; Ma and Roese 2014), which in turn influences their behavior. However, no research has explored the effect of the maximizing mindset on charitable behavior.

In the current research, we propose that the maximizing mindset promotes charitable behavior. Unlike past research which identifies the negative consequences of applying this mindset (e.g., choice dissatisfaction, Iyengar, Wells, and Schwartz 2006; Ma and Roese 2014; Schwartz et al. 2002; immoral behavior, Goldsmith, Roux, and Ma 2018). This research points at the bright side of applying the maximizing mindset as expressed by more charitable behavior.

We assume that in the context of charitable behavior, when donors are faced with the victims' misfortune, downward social comparison is likely to be evoked; that is, donors would feel that their state is better off than that of those in need (Wills 1981). Based on this assumption, we propose that this activation of downward social comparison is more likely to occur among donors with the maximizing mindset (compared with non-maximizers). This proposition is based on research showing that, in general, maximizers (compared with non-maximizers) tend to engage more in comparison (Schwartz et al. 2002). Specifically, in social contexts, maximizers show a higher tendency to engage in social comparison (Polman 2010; Schwartz et al. 2002; Weaver et al. 2015). Building on this line of work, we argue that when encountered with a donation request for someone in need, donors with the maximizing mindset would be more likely to engage in social comparison compared with donors without the maximizing mindset. The misfortune of the victims in need is likely to evoke a downward social comparison. Past research has shown that downward social comparison leads to more charitable behavior (Klein 2003; Van de Ven, Zeelenberg, and Pieters 2010). As a result, we propose that donors with the maximizing mindset would express more charitable behavior than donors without the maximizing mindset.

Study 1 (N=108), tested the relationship between the maximizing tendency and charitable behavior with the maximizing tendency measured as an individual difference. Participants were asked to report how much they would like to donate to a campaign dedicated to college students in need and complete a scale measuring their maximizing tendency. This scale was proposed by Cheek and Schwartz (2016) based on their review of all published maximizing measures and included 19 items which were combined into a single index (α = .93). Results showed that the higher participants' maximizing tendency the higher the donation amount, controlling for two donation-related experiences (i.e., past donation behavior and familiarity with the donation campaign; β=.20, $t(104)$=2.30, p=.023, d=.45).

Study 2 (N=121), tested the effect of the maximizing mindset on charitable behavior by manipulating the maximizing mindset. Participants were randomly assigned to one of two mindset conditions (maximizing vs. neutral). Participants in the maximizing mindset condition reported their "best choice" across 10 domains, while participants in the neutral mindset condition merely reported their current state across the same 10 domains (Ma and Roese 2014). Next, participants reported how much they would like to donate to a campaign dedicated to children in need and rate their mood in order to test mood as a potential alternative explanation. Results showed that participants in the maximizing mindset condition reported a higher donation amount (M=51.31, SD=30.62) than participants in the neutral mindset condition, controlling for the two donation-related experiences (M=40.52, SD=27.03; $F(1,117)$=6.09, p=.015, d=.45). Results also revealed that the two mindset conditions did not differ across the mood measures (all p's > .10), suggesting that mood cannot account for the effect.

Study 3, tested the generalizability of the effect of the maximizing mindset on charitable behavior with a secondary dataset from the Tencent Charity Platform, which included 14,148 completed campaigns. Two independent coders blind to the purpose of the study read the brief introduction of each donation campaign and identified the words related to the maximizing goal and the comparison strategy. Donation campaigns containing both types of words were construed as maximizing campaigns and all others were construed as non-maximizing campaigns. Results showed that maximizing campaigns produced a significantly higher donation amount than non-maximizing campaigns (β=.03, $t(14,137)$ = 3.93, p<.001, d=.06), controlling for campaign's NGO size, campaign amount goal, campaign domain, campaign recency, and the campaign's text-length.

Study 4 (N=121), tested the mediating role of downward social comparison. Participants were randomly assigned to one of the mindset conditions as in study 2. Participants reported how much they would like to donate to a campaign and indicated their thoughts related downward social comparison by responding to four items relating to children in need (α=.67). A mediation analysis showed that downward social comparison mediated the effect of the maximizing mindset on donation amount (β=.04, SE_{boot}=.02, CI [.00, .10]).

Taken together, results of studies 1-4 provided convergent evidence that the maximizing mindset leads to more charitable behavior. Furthermore, results of study 4 supported the proposition that this effect was driven by donors' downward social comparison.

This research offers several theoretical and practical implications. From a theoretical standpoint, this research reveals a new and timely antecedent for charitable behavior – namely donors' maximizing mindset. Furthermore, it is among the few papers which highlight the positive outcomes of applying the maximizing mindset. Finally, it opens a new avenue for research on the maximizing mindset. That is, identifying different types of comparison (upward vs. downward) maximizers are engaging in may leads to a discovery of consequences which have never been explored. From a practical perspective, this research demonstrates how donation campaigns can use different wordings to activate different mindsets which in turn change donors' donation amounts.

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Perceptions of Collaborations:
How Many Cooks Seem to Spoil the Broth?

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EXTENDED ABSTRACT

Are two heads better than one, yet can too many cooks spoil the broth? The relevance of this question has led to a variety of answers to it from different fields. In the arts, patrons relish works produced by a single artistic vision (Valsesia, Nunes, and Ordanini 2015). Nonetheless, marketers have heralded the benefits of cobranding, presenting new offerings as the product of two firms (Rao and Ruekert 1994). Consumers can see two firms as better than one, but might three be seen as better than two, four as better than three? Or might an upper bound identify a saturation point beyond which additional collaborators fail to seemingly augment – or might even detract from – the final product?

Groups, from the vantage point of their members, are often (mistakenly) expected to brainstorm better than individuals (Paulus et al. 1993; Stroebe, Diehl, and Abakoumkin 1992). If members anticipate an advantage for their own groups, then perhaps observers similarly anticipate an advantage for the collaborations of others over solo endeavours, though the optimal size of the collaboration remains open; perhaps observers anticipate an advantage for collaborations, but only up to a point.

In an initial, exploratory study, we created a 25-item list of different outputs, then presented them to 229 respondents from the Mechanical Turk platform and asked them to indicate the optimal number of collaborators to create each (e.g., authors to write a novel, engineers to design a bicycle) using the following scale: just one, some specific number (which they then provided), or as many as possible. For the majority of the outputs, the majority of participants entered a specific number, suggesting that, at least among our set of 25, most tasks are perceived to be optimized when a specific number of individuals collaborate.

To identify what might drive consumers to prefer more collaborators, Study 1 adopted a correlational design in first asking 203 respondents from Mechanical Turk about the optimal number of collaborators (again, one, some specific number, or as many as possible) for seven different outputs: a TV episode, a car, a bridge, an app, a behavioral research project, a sport technique, and a fire escape plan. Participants then indicated how complex they believed those outputs to be on a scale ranging from 1 (not complex) to 7 (very complex). Because an appreciation of greater nuance can lead people to allocate more resources toward its completion (e.g., time; Kruger and Evans 2004), we anticipated and found a positive correlation between perceived complexity and preferences for a larger number of collaborators, $r = 0.25$, $p < .001$.

Thereafter, Study 2 identified the causal role of perceived complexity. 300 respondents from Mechanical Turk reported the optimal number of collaborators to create a ballpoint pen, a bike lock, and a watch. Prior to reporting their preference, though, they were randomly assigned to one of three conditions. In the high complexity condition ($n = 100$), they were taken through a protocol modified from the literature on the illusion of explanatory depth (Rozenbilt and Keil, 2002) in which they attempted to provide a full description of the objects' actual workings. As this methodology has been shown to lead people to realize they do not appreciate the degree of nuance inherent to these actual workings (i.e., they hold an illusion of explanatory depth), we reasoned that it would make those objects seem more complex. The low complexity condition ($n = 100$) followed a similar structure that asked participants to provide a full list of locations at which those objects could be purchased. In a control condition ($n = 100$), participants performed no such task and proceeded directly to our outcome variable, which again asked participants from all three conditions to indicate the optimal number of collaborators to create a ballpoint pen, a bike lock, and a watch. Participants in the high complexity condition reported a greater number of optimal collaborators averaged across the three objects ($M = 7.02$) than participants in the low complexity condition ($M = 4.52$), $p = .01$, and participants in the control condition ($M = 4.77$), $p = .02$, with no difference between the latter two conditions, $p > .8$.

Having documented that consumers hold an ideal size in mind when thinking about groups collaborating to create specific outputs, our final experiment asked whether products benefit from ostensibly hitting this mark in reporting that they had been created by an optimal number of collaborators (not too many, not foo few). Lab-based Study 3 directly manipulated group size, telling participants (via random assignment) that a cookie ostensibly baked for a taste test had been prepared by one ($n = 24$), four ($n = 24$), or eight ($n = 25$) bakers. Upon sampling and then reporting on the quality of the cookie, participants in the four-baker condition rated it as tasting better ($M = 7.08$) than participants in the one-baker condition ($M = 5.63$), $p = .005$, and participants in the eight-baker condition ($M = 6.24$), $p = .09$, with no difference between the one- and eight-baker conditions, $p > .2$, providing evidence that some collaboration (i.e., four bakers) appears beneficial over none (i.e., one baker) but also comes with limits, as increasing collaboration (i.e., eight bakers) did not make for an increasingly tasty cookie..

Two countervailing forces appear to operate in the perception of collaboration. From one side, at least in the absence of artistic expression, increasing complexity fosters a belief that more collaborators help in producing a better output. At the same time, consumers intuit domain-dependent maxima that cap the extent to which more collaborators strengthen a given cause and, beyond which, those additional collaborators start to compromise it. These findings offer the possibility that observers might expect additional factors to help or hurt group work (as inherent to the task or to the collaborators themselves) and underscore the applied relevance of promoting the right number of collaborators in the interest of enhancing consumer expectations and, in turn, enhancing consumer experiences with the products of collaboration.

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I See, I Sense, I Desire: How Spatial Distance of Indulgent Products Within Advertisements Affects Desire to Eat, Purchase Intention, and Satiation?

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EXTENDED ABSTRACT

Simply viewing pictures of indulgent food (e.g., juicy burger) could trigger an individual's physiological and psychological responses (Moore & Konrath, 2015; Simmons, Martin, & Barsalou, 2005). We extend this literature by examining how, why and when does the proximal depiction of indulgent food influence different consumption-outcomes.

We build our argument through inferences from different literatures. To begin, we draw upon the construal level theory that posits that spatial proximity to a stimulus might activate a concrete mindset (Trope & Liberman, 2010). This mindset, once activated, could lead to actions and behavior that facilitate indulgence (Fujita, Trope, Liberman, & Levin-Sagi, 2006). We, therefore, propose that proximal (vs. distant) depiction of indulgent food will evince higher (vs. lower) consumption outcomes (Hypothesis 1). We attribute this effect to the perception of tastiness. This is because pictures of indulgent food might be implicitly associated with tastiness (Raghunathan, Naylor, & Hoyer, 2006) and taste, by itself, is a proximal sensory experience (Elder, Schlosser, Poor, & Xu, 2017). Thus, we predict that proximal (vs. distant) depiction of an indulgent food will evince higher (vs. lower) perceived tastiness and, consequently, higher (vs. lower) consumption outcomes (Hypothesis 2). However, these effects might depend on the number of exposures to similar food pictures. Evidence suggests that multiple evaluation of food pictures, sharing a taste-attribute, might be enough to evince satiation (Larson, Redden, & Elder, 2014). Furthermore, satiation is likely to be higher for sensory (e.g., taste) compared to non-sensory attributes (Inman, 2001). We, thus, expect that multiple-proximal (vs. multiple-distant) depictions of indulgent food will lead to higher (vs. lower) satiation (Hypothesis 3a). This effect will be driven by the lower (vs. higher) perceived tastiness from multiple-proximal (vs. multiple-distant) depiction (Hypothesis 3b).

In study 1, MTurk participants ($N = 139$; 54.68% female, $M_{age} = 37.20$) were assigned to either proximal or distant between-subject conditions. They saw an advertisement that included a professional picture of a hamburger (edited for spatial distance) and, then, indicated their desire to eat and perceived tastiness. The participants also shared their hours since the last eating, dietary restrictions, gender, age and time of day – all of which were included as control variables.

An ANCOVA on desire to eat was significant ($F_{(1,131)} = 3.97$, $p = .05$, partial-$\eta^2 = .03$) – with proximal (vs. distant) depiction ($M_{proximal} = 5.08$ vs. $M_{distant} = 4.48$) evincing higher consumption desire while controlling for covariates (Hypothesis 1). Only hours since the last eating had a significant effect but its interaction with the predictor variable was non-significant. Then, using Model 4 of PROCESS Macro (Hayes, 2012), we analyzed the mediation effect of perceived tastiness. We found that the product's spatial proximity (coded: -1) led to a significant increase in perceived tastiness (a_1: = -.30, $p = .03$). Furthermore, controlling for spatial distance, higher perceived tastiness resulted in greater desire to eat (b_1: =.87, $p < .01$). Lastly, the effect of spatial distance on desire to eat became non-significant upon adjusting for perceived tastiness, (c_1': = -.04, $p = .65$), thereby indicating full mediation (95% CI: [-.49, -.04]; Hypothesis 2).

In Study 2, we sought to replicate these effects for purchase intention. The participants ($N = 200$, 64.50% female; $M_{age} = 38.21$ years) were assigned to either proximal or distant condition in a between-subjects design. The results of an ANCOVA showed a marginally-significant effect ($F_{(1, 193)} = 3.56$, $p = .06$, partial-$\eta^2 = .02$) with proximal depiction leading to a higher purchase intention ($M_{proximal} = 4.88$ vs. $M_{distant} = 4.40$; Hypothesis 1). Dietary restriction was a significant covariate but its interaction with the predictor variable was not significant.

Next, we analyzed the mediation effect of perceived tastiness on purchase intention. First, we found that spatial proximity (coded: -1) increased the perceived tastiness (a_1: β = -.24, $p < .01$). Second, controlling for spatial distance, perceived tastiness significantly increased the purchase intention (b_1: β = 1.11, $p < .01$). Lastly, the effect of spatial distance on purchase intention became non-significant after considering the mediator (c_1': β = -.01, $p = .91$). Implying full-mediation, the 95% confidence interval did not include zero (95% CI = -.45, -.08; Hypothesis 2). Through two post-tests, we also ruled-out alternative explanations pertaining to portion-size perception, and differences by product-types.

In a final study, we assigned MTurk participants ($N=146$; 52.05% female, $M_{age}=37.74$) to either multiple-proximal or multiple-distant depiction condition in a between-subjects design. They viewed 20 food ad pictures – each for a duration of 3 seconds. The first and last picture of target product (i.e., hamburger) was kept identical and, accordingly, we measured expected enjoyment (measure of satiation) and perceived tastiness on two occasions. This study additionally measured the participants' BMI, distance from screen, and mood as covariates.

We conducted a repeated measures ANCOVA with spatial distance as between-subjects factor and satiation as within-subjects factor. The analysis revealed that those viewing multiple-proximal depictions evinced a significantly higher satiation ($M_{multiple-proximal} = -.93$ vs. $M_{multiple-distant} = -.36$; Hypothesis 3.a.). The within-subjects effect of multiple-depictions on satiation was significant ($F_{(1,137)} = 6.90$, $p = .01$, partial-$\eta^2 = .05$). Among the covariates, the time-of-day and its interaction with spatial distance were significant ($p < .01$). This is consistent with prior research (Birch, Billman, & Richards, 1984).

Furthermore, we examined the mediation of perceived tastiness on satiation. We found that multiple-proximal (coded: -1) depictions led to a significant decline in perceived tastiness (a_1: = .38, $p < .01$). This decline in perceived tastiness was, in-turn, associated with a significantly higher satiation (b_1: = .86, $p < .01$). Moreover, the direct path from multiple-proximal (vs. multiple-distant) depictions to satiation was no longer significant after including change in perceived tastiness (c': = -.05, $p = .50$), thereby indicating a full mediation (95% CI: [.16, .51]; Hypothesis 3.b.).

Taken together, these findings have implications for the advertising business and, more importantly, for over-consumption. From a theoretical standpoint, we offer contribution to the food consumption and satiation literature by focusing on the influence of spatial proximity (vs. distance) of products within advertisement pictures.

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Service Failures in the Sharing Economy:
Consumer Tolerance Towards Collaborative Service Quality

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EXTENDED ABSTRACT

Disrupting many businesses, the sharing economy (SE) radically changes the way we consume services on the premise of horizontal peer-to-peer transactions generally coordinated through online platforms. Although the SE redefines most service attributes and despite the massive use of web platforms, some of those attributes remain at the heart of the service landscape and are even reinforced. For instance, the degree of person-to-person interaction is often stronger than in peer-to-peer accommodation or transportation.

As for any other service, those interactions are central in the service experience (Arnould et *al.*, 2002) and influence consumers' evaluation process. Similarly to traditional businesses, companies in the SE aim at creating satisfying service experiences. However, the core service is not delivered by a professional provider, but rather by a peer, which results in a high degree of heterogeneity that may impact the experience.

Press articles and blogs often depict collaborative experiences as enjoyable. The literature also presents most collaborative experiences as being positive and even sometimes transformative (Decrop et *al.*, 2018). However, very few studies discuss the determinants of consumer satisfaction (Möhlmann, 2015; Tussyadiah, 2016), commitment and loyalty (Yang et *al.*, 2017) in the collaborative context.

As collaborative consumption offers the possibility to exchange differently, consumers may change their attitudes and behaviors regarding consumption (Bardhi and Eckhardt, 2012; Botsman and Rogers, 2010) and they may alter their expectations and their evaluation criteria.

Yet these studies raise the following question: What happens when the service experience goes wrong? Interestingly, a large survey among French collaborative consumers shows that 33% have already lived a bad experience but amazingly only 10% have decided to give it up (Fing and OuiShare, 2015). Does it mean that collaborative consumers are more tolerant? Which specific factors and processes induce such an increased level of tolerance?

The SE includes a large number of initiatives with different forms of exchanges and objectives. The literature often highlights the duality of collaborative consumption that navigates between relational objectives/orientations and commercial ones (Belk, 2014; Habibi, Kim, and Laroche, 2016; Scaraboto, 2015). Moreover, recent research shows that, in monetized as well as non-monetized context, the nature of the relationship influences the (dis)satisfaction formation in collaborative services (Mallargé, Decrop and Zidda, forthcoming). Therefore, our main hypothesis is that consumers are more tolerant (i.e. showing higher satisfaction, lower attribution and lower service recovery expectations) in a collaborative context when a service failure occurs and especially when the service contains a high level of relational interactions.

The duality of collaborative consumption may also lead to mixing informal friendship ties with a more formal commercial exchange (e.g., you are received by your host in a private home but you have paid for that), which creates a kind of ambiguity in the relationship. Those elements affect the expectations towards the service itself but also towards the peer because the consumer is not always able to anticipate how the other will behave. For that, relationship norms may help as "guiding principles, rules that people use to decide the right way to behave in a given situation" (Aggarwal and Zhang, 2006, p.414). As far as behaviors are aligned, the interactions run smoothly and reach a certain degree of congruence leading to satisfaction (Sharma, Tam and Kim, 2009).

Therefore, we assume that the absence of role congruence between users impacts negatively the service evaluation in case of service failure. In contrast, if users adopt congruent behaviors, consumer might be more tolerant.

These main research questions have been addressed through a scenario-based experimental approach with two studies involving 2x2 between-subject designs. The first study (N=136) examines whether the type of service (collaborative vs traditional) and the nature of the relationship (low touch vs high touch) influence the service evaluation when a service failure happens. Our results suggest that consumers are more tolerant towards service failure in a collaborative context. Indeed, the failure attribution to the platform is significantly lower ($F(1,132) = 21.734$, $p < .001$), such that participants, in a collaborative context, considered the platform as less responsible ($M_{Collaborative} = 3.67$, $S.D. = 1.55$) than participants placed in a traditional service context ($M_{Traditional} = 4.92$, $S.D. = 1.54$). In contradiction to our hypothesis assuming that the tolerance would increase in high touch condition, it appears that the nature of the relationship has a mitigate impact. Indeed, only the failure attribution to the staff/peer was significantly different ($M_{HighTouch} = 4.22$ vs. $M_{LowTouch} = 4.77$; $F(1,132) = 4.993$, $p < .05$). The interaction effect for this dependent variable was marginally significant ($F(1,132) = 3,757$, $p = .0547$). In addition, our regression analysis shows that the interaction between the past experience and the type of services is significant ($\beta = .200$, $t = 3.467$, $p < .001$), showing that consumers are more satisfied when they are experienced with the collaborative service, which is not such the case with the traditional service.

In study 2 (N=115), we investigate whether the relationship norms' congruence (Clark and Mills, 1993) influences the service evaluation in a collaborative context. We manipulate relationship norms (exchange vs communal) adopted by the service provider and by the user/consumer respectively. Exchange relationships "are those in which people give benefits to others in order to get back comparable benefit" (Aggarwal and Law, 2005, p. 454). At the opposite, communal relationships are comparable to relationships with friends or family. In this case, caring is central and the persons involved keep no track of the inputs and contributions of the other. Analyses confirm that consumers are more tolerant in their evaluation when their norms are congruent with the norms adopted by the peer provider. The perceived quality of the service is higher ($M_{Congruence} = 3.15$ vs. $M_{NoCongruence} = 2.64$; $F(1,114) = 7.873$, $p < .01$), as well as satisfaction ($M_{Congruence} = 3.43$ vs. $M_{NoCongruence} = 2.85$; $F(1,114) = 7.72$, $p < .01$). The service failure attribution is lower in case of congruence ($M_{Congruence} = 3.73$ vs. $M_{NoCongruence} = 4.52$; $F(1,114) = 10.668$, $p < .01$).

This research contributes to the service evaluation literature by showing that consumers tend to be more tolerant towards a service failure in a SE context than in a traditional business context and that the congruence of norms adopted by the peer service provider and the user plays a central role here.

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Consumer Minimalism as Identity Curation Process

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EXTENDED ABSTRACT

Minimalism in consumer behavior is on the rise, with consumers voluntarily choosing to shed their possessions, simplify their shopping habits, collect experiences versus material items, and focus on their psychological and financial well-being (Weinswig 2016). Rooted in voluntary simplicity, "the choice out of free will… to limit expenditures on consumer goods and services, and to cultivate non-materialistic sources of satisfaction and meaning" (Etzioni 1998, 620), consumer minimalism involves the strategic dispossession of personal items and the voluntary decision to limit the retention of current possessions and acquisition of new possessions. Previous research on voluntary simplicity and anti-consumption has addressed who engages in these behaviors (e.g., "downshifters": Etzioni 1998), why they do so (e.g., ecological awareness: Leonard-Barton 1981), and what behaviors are characteristic of these consumers (e.g., avoiding impulse purchases: Huneke 2005). However, to date, little research has focused on the *how*; that is, the psychological and physical process by which individuals become more minimal in their consumer behavior.

To address this gap, we developed a rich macro, market, and micro-level dataset focused on consumer transitions into minimalism via capsule wardrobes (small, curated wardrobe comprised of timeless pieces and complementary seasonal items), tiny houses (homes typically less than 500 square feet), vanlife (living out of a converted van), and general minimal lifestyles (minimalism across multiple domains). During phase one of data collection, we gathered text, images, and quotes from news articles, websites, blogs, books, and television shows about consumer minimalism (211 unique sources, yielding over 600 pages of data). These secondary data sources informed our interview guide and model development for the second phase of data collection. During phase two, we conducted depth interviews with 30 minimalist consumers across multiple consumer segments using theoretical sampling techniques. Following the workbench modes outlined by Giesler and Thompson (2016), we coded for transformation using a series of intratextual, intertextual, and intertemporal analyses to uncover how consumers move from a less minimal (Reality 1) to more minimal lifestyle (Reality 2).

Results reveal that the process of becoming more minimal is a recursive, three-phase consumer identity curation process. We define consumer identity curation as the deliberate, ongoing process of dispossessing, retaining, and acquiring a cohesive collection of products and services that define and provide value to the present self. The identity curation process is more nuanced for minimalists in that they: i) define and maintain focus on their best present selves, and ii) limit the number of items in their curated collection to "just enough" (an amount of possessions that is different for everyone based on their present self needs). This process is akin to curating a museum or art collection, where curators seek out items for an exhibit that tell a cohesive story without much overlap between items in the collection (Litchfield and Gilson 2013).

Consumer identities are comprised of multiple selves (Markus & Nurius 1986), and minimalists in our sample defined their best present self in the first phase of the identity curation process. The best present self reconciles one's actual and ideal selves and signifies who he or she wants to be and can be at the present moment; that is, an accessible version of one's ideal self. This sentiment is noted in a *Mademoiselle* blog post (2016), "For me, the capsule wardrobe jour-

ney was largely about defining my personal style, becoming more aware of what I do and don't like, making more conscious purchases, and wearing only the things that I love, every day." By first identifying one's best present self, minimizers develop a reference point against which to evaluate all consumption decisions.

The second phase of the minimalism identity curation is the editing process, during which minimizers maintain focus on the best present self across all dispossession, retention, and acquisition behaviors. Dispossession, "the psychological and emotional process in which owners/consumers relinquish self-ties to possessions" (Roster 2014, 322), arose as one of the most important activities of the editing process for minimalists. One informant said, "Okay, I don't need this in my life, because that's not really how I want to present myself," which highlights the best present self focus. Next, retention (the process of rekindling self-ties to one's existing possessions) requires minimalists to make active decisions to only keep items that support one's best present self. One informant said retention decisions are about "going over the stuff that you have and really thinking about why you have it, why you're keeping it around, and if you're actually going to use it." Next, acquisition (the process of creating self-ties to new possessions) allows minimalists to collect a limited amount of new possessions that reflect and support one's best present self. One capsule wardrobe informant said, "So it's kind of learning to be more in touch with who I am, and what my personal style is… and then in the future keeping that in mind when I do shop."

Further analysis revealed four key self-focused strategies used by minimalists during the editing phase: self-honesty, intentionality, detachment, and reallocation of resources. Consumers practiced self-honesty by "being brutal with yourself and really honest about what you are going to use and what you are not going to use." Intentionality helped minimalists in our sample avoid impulse buying situations and encouraged retaining and acquiring multiuse, multifunctional pieces that did not overlap with other retained possessions. The best present self focus also supports consumers in editing decisions through detachment. One tiny house participant said, "If we find something that's still unnecessary, we're pretty fast about throwing it away." Throughout the editing process, minimalists also reallocate time, physical space, and financial and psychological resources to support one's best present self through nonmaterial endeavors like "traveling and experiences."

The third phase of the minimalism identity curation process is characterized by reevaluation and maintenance. Most participants recounted fairly "regular purges" and seasonal adjustments, suggesting that minimalism is an ongoing journey. As the self transforms over time, so continues the process of identity curation for consumers practicing minimalism.

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Local Versus Global: The Effect of Identity Salience on Creativity

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EXTENDED ABSTRACT

There has been a paradigm shift in marketing where companies now extensively use consumers in their innovative processes and adopt various strategies to enhance creativity of consumer inputs. For example, Threadless seeks input from its consumers by offering incentives and setting up competitions for submitting creative designs of T-shirts and also taps into various aspects of the consumers, such as their personality and associations, to enhance creativity of the inputs. For instance, one campaign asked consumers to submit T-shirt designs that represented their local city, whereas another campaign asked consumers to submit designs that celebrated the art of foreign phrases. While these two campaigns appear forthright, they also align with the concept of social identity (Oyserman 2009).

Prior research has examined the role of social identity and their salience on creativity. It has been found that having multicultural experiences enhances one's ability to generate novel and original ideas (Leung et al. 2008). The positive effect of a multifaceted social identity on creativity also holds when an individual has multiple identities. However, extant literature has ignored the role played by local-global identity.

Although prior research has not examined the relationship between local-global identity and creativity, extant findings seem to imply that consumers with a global identity tend to have more multicultural experiences (Arnett 2002), which in turn positively affects creativity (Leung et al. 2008). In contrast, we propose that consumers with a local (vs. global) identity are more likely to be creative. Although there can be several reasons for this relationship, we focus on one, namely greater relationship focus. We propose that a local (vs. global) identity is associated with a general relationship-focus mindset. The enhanced salience of relationship focus leads people to notice, encode, and process the relationship information more fluently; thereby inducing a cognitive process that enables recognition and fluent retrieval of remote associations between loosely-connected ideas and concepts, which in fact is bedrock of creativity (Maddux and Galinsky 2009).

Previous research shows that individuals whose local identity is salient are faithful and respectful of local traditions, interested in local events, and identify with people in one's local community, whereas those with a salient global identity view the world as a "global village" (Zhang and Khare 2009). We argue that such focus on relationships makes individuals better at linking and integrating loosely-connected ideas and concepts together, which in turn leads to higher creativity. Although we argue that salience of a consumer's local identity will positively impact creativity, we do not expect one's global identity to have a similar effect. While prior literature has suggested that diversity and multiplicity aspects of one's identity positively impact creativity, it has been shown that such positive effect depends on how well consumers are able to integrate such diverse and differentiating aspects associated with one's identity. For example, although having exposure to global phenomenon such as multicultural experiences of living abroad has been found to positively impact creativity, such effects only hold when consumers open themselves up to adaptation to foreign cultures and are able to integrate multiple cultural experiences. Simple exposure to foreign cultures achieved through simply travelling abroad does not produce the same effects (Maddux and Galinsky 2009). Further, while salience of local identity enhances one's focus on social connections and relationships, consumers with an accessible global identity tend to identify with the entire world, which represents a much larger group with more strangers and fewer personal connections (Gao, Mittal, Zhang 2018). Such inherent nature of global identity impedes focus on one's social connections and relationships; thereby restricting positive implications for creativity. We test our hypotheses through the following five studies.

In Study 1, we assessed publicly available data for two different crowdsourcing campaigns organized by Threadless.com. The first campaign aligned with the salience of local identity, and the second campaign promoted global identity. Each of the submitted designs was voted on by consumers for its creativity and whether it should be printed. The designs submitted for the theme representing local-identity were scored significantly higher as compared to the designs submitted to the global theme.

Study 2 tests the robustness of our effect under controlled condition. Participants were assigned to local/global identity conditions through a sentence scrambling task. In a shoe-shine problem-solving task, the solutions generated by participants were rated for creativity by independent judges. The result revealed that ideas generated by locals were rated as more creative than globals.

Study 3 used the same manipulation of identity salience as in study 1 and utilized Remote Association Test task to assess participants' creativity. Locals performed significantly better than globals, demonstrating higher level of creativity.

Study 4 examined the mediating role of relationship-focus. Participants were assigned to local/global identity conditions and presented with information about a prominent museum in the city to propose a new logo for it. Participants were then asked to rate a measure of relationship-focus. The produced logo designs were rated for creativity by independent judges. The result showed that the designs generated by locals were judged to be more creative as compared those created by globals. Also, significant main effect of identity salience was observed on relationship-focus, which positively mediated the relationship between identity salience and creativity.

Study 5 adopted a 2 (identity: local vs. global) × 3 (relationship focus: enhanced, reduced, control) between-subjects design to demonstrate the moderating role of relationship-focus. The effect of identity salience emerged under the control condition. Externally inducing relationship focus enhanced creativity, while externally reducing relationship focus mitigated the effect.

Our research demonstrates that locals are more creative than globals, due to higher greater relationship focus. Our findings provide new insights for creativity literature by suggesting salience of local identity as an antecedent to creativity. Our research also contributes to the social identity and identity salience literature by demonstrating that the salience of identity can induce different levels of perceived relationship focus thereby impacting the creativity. Also, we show that situational factors that enhance or suppress relationship-focus can set up boundary conditions for the effects of identity on creativity.

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Outrage Drives Facebook Users to Engage with Ideology Inconsistent Political Content

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EXTENDED ABSTRACT

People typically prefer to engage with political content that is ideology-consistent (Brannon, Tagler, & Eagly, 2007; Festinger, 1957). However, they cannot always control their environment, even in the self-curated age of social media. For example, a politically conservative Facebook user may be exposed to a gun control post shared by a liberal friend. Likewise, a liberal Facebook user may be exposed to a repeal Obamacare post because a special interest group paid for it to appear on their newsfeed. Here we examine how people react to newsfeed posts advocating for an ideology-inconsistent cause.

Extant literature suggests that when people encounter a post advocating for an ideology-inconsistent political cause, they will tend to ignore it in order to avoid further exposure to information inconsistent with their beliefs However, some have shown that ideology-inconsistent content can also evoke negative emotions, such as anger, disgust, and indignation, which we will collectively refer to as 'outrage' (Festinger, 1957; Munro, et al., 2002), and outrage often increases online engagement (Berger, 2011; Berger & Milkman, 2012). We therefore predict that encountering social media posts advocating for a rival political cause may outrage people enough that they will engage with them more than with posts advocating for an ideology-consistent cause.

We tested how outrage affects online engagement in a series of field studies that exposed over half a million Americans to political posts on Facebook. These posts advocated for either a liberal or conservative cause, and targeted American adults who were identified on Facebook as politically conservative or liberal. This classification allowed us to test whether Americans are more likely to engage with content advocating for an ideology-inconsistent political cause than an ideology-consistent one on their newsfeed. For robustness purposes, we report the results of three studies focusing on different politically charged topics: Gun Control, Obamacare, and President Trump. In all three studies, we measure engagement with the Facebook posts as any type of click on the post.

Across the first three first studies (n = 584,998 Facebook users) we find that people are about four times more likely to engage with Facebook posts advocating for an ideology-inconsistent political cause than an ideology-consistent one. For example, exposing liberals to a Facebook post advocating support for President Trump resulted in more engagement than exposing liberals to a post that opposing him. Likewise, conservatives were more likely to engage with a Trump opposition post than a Trump support post. This interaction is significant in all three studies (*p* < .001).

Although we cannot directly ask or measure why Facebook users respond so strongly to this ideology-inconsistent content, many features of the pattern we observe support our hypothesis that the increased engagement is driven by outrage. First, we find that conservatives are consistently more likely than liberals to engage with the ideology-inconsistent content, which aligns with previous literature showing that conservatives typically show a greater negative emotional reaction to ideology-inconsistent political information than liberals (Brady, et al., 2017). Additionally, we see evidence of outrage in the sentiment expressed by the Facebook post reactions.

Facebook allows users to express one of six different reactions to every post, which we categorize as either positive (e.g., love) or negative (e.g., anger). Overwhelmingly, we find that people's emotional reactions to ideology-inconsistent posts are negative and their reactions to ideology-consistent posts are positive. These results suggest that engagement with ideology-inconsistent political posts is not driven by users' desire to learn more about opposing perspectives, but rather by a desire to express outrage over content advocating for a cause inconsistent with their ideology. Outrage fueled engagement appears to be robust in that we observe the same pattern for written comments; ideology-inconsistent posts generate the most comments, which are typically angry.

In Study 4 (n = 200,588) we explore the boundaries of outrage fueled social media engagement by manipulating how threatening the ideology-inconsistent political posts are to one's in-group. We do this by framing our political Facebook posts either in terms of fighting for a political cause (high threat) or merely providing information about the cause (low threat). We predict higher levels of engagement with posts framed in a more threatening manner. That is, that conservative Facebook users will be more likely to react to anti-gun posts that advocate for gun control than to those that merely provide information about the dangers of guns. Similarly, that liberals will react more to posts that promote gun rights than to those that provide information about the benefits of guns. Indeed, we find that users have a stronger response to ideology-inconsistent political posts that explicitly fight for a cause than to posts that merely provide information about it. As before, we see that Facebook users are more likely to engage with ideology-inconsistent political posts than with ideology-consistent posts. Crucially, the effect is significantly larger for fight framed posts than information framed posts (β = -.11, SE = .04, p <.01).

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The "Calories-Must-Be-Bad" Bias: How the Belief that Calories are Unhealthy Increases the Choice Share of Less Nutritious Options

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EXTENDED ABSTRACT

Faced with a widespread problem of obesity, public health programs have long warned consumers to mind their calorie intake, with mixed results (Long et al. 2015; Parker and Lehmann 2014; Shah et al. 2014). We argue that the incessant negative attention to calories has led to an unjustified belief that "calories must be bad" that biases judgments of perceived nutritional value of relatively more (versus less) nutritious products, as well as consumers' choices of snacks. As calories are believed to be bad, they are psychologically strongly associated with less nutritious products, while in reality more nutritious products often contain as many or more calories (e.g., walnuts and olive oil are more calorie-dense than potato chips and butter, respectively). We propose that this bias can harm long-standing efforts to improve people's diet (Mozaffarian 2016).

Study 1 aimed to establish market evidence that in several categories of snacks, more nutritious options have as many calories as less nutritious counterparts. We recorded the nutritional content of the top 20 bestsellers in three more nutritious categories (granola bars, nuts & seeds, trail snack & mixes) and three less nutritious categories (cookies, potato chips, candies & chocolate) based on the ranking of a large online retailer (i.e., Amazon). Two pretests found that "granola bars", "nuts & seeds", and "trail snack & mixes" are perceived as good substitutes for and as more nutritious than "cookies", "potato chips", and "candies & chocolate" respectively. We found that products in the more nutritious categories and those in the less nutritious categories do not differ in caloric content, $F(1, 111) = 1.20$, $p = .28$. However, more nutritious snacks have more proteins, $p < .001$, marginally more fibers, $p < .09$, less saturated fat, $p < .001$, and marginally less sugar, $p < .08$. This suggests that at equal caloric content, products can vary significantly in their nutritional profile.

In study 2, we administered (n = 104 Mturkers) a calorie estimation task. Participants were given the caloric content of more or less nutritious products and asked to guess the caloric content of less or more nutritious products. A random-coefficient hierarchical linear model revealed a significant interaction, $F(1, 309) = 15.7$, $p < .001$. When given the caloric content of less nutritious foods, participants underestimated the caloric content of more nutritious foods ($M = -169.3$). Conversely, when given the calories of more nutritious foods, participants overestimated the caloric content of less nutritious foods ($M = 83.2$). This supports our prediction that people hold a "calories-must-be-bad" bias (i.e., they do not believe more nutritious products can contain as many calories as less nutritious ones).

In study 3 (n = 204 US students), we tested the effect of providing calorie information on the perceived nutritional value of two products, one being relatively more nutritious but higher in calories (i.e., dark chocolate) than the other (i.e., milk chocolate). We also measured nutrition literacy with a five-item scale inspired from prior literature on food wellbeing (Block et al. 2011). We found an interaction between calorie information and nutrition literacy, $F(1, 200) = 8.12$, $p < .01$, such that calorie information reduces the perceived nutritional value of the more nutritious product for participants low in nutrition literacy ($M - 1SD$), but not for participants high in nutrition literacy ($M + 1SD$). The perceived nutritional value of the less nutritious product was unaffected.

Study 4 (n = 496 Mturkers) asked participants to choose between a regular granola bar and a more nutritious (i.e., nutrient-added) granola bar. In a 2 x 2 between-subject design we manipulated whether we provided calorie information and whether the added nutrient contained calories (i.e., proteins or omega 3) or not (i.e., calcium or vitamin C). We found an interaction, $\chi^2 (1) = 22.59$, $p < .001$, such that when calorie information is present (vs. absent), the probability of choosing the more nutritious granola bar is reduced only when the added nutrient contains calories (62% vs. 88%, $p < .001$).

In study 5 (n = 327 Mturkers), we further propose that providing calorie information induces a negative approach to food that neglects beneficial aspects (e.g., good nutrients). We therefore posit that the negative effect of calorie information on more nutritious products is stronger when nutritional information emphasizes negative outcomes. To test this, half participants read a text emphasizing negative aspects of foods (e.g., eat less unhealthy food to prevent the occurrence of cardio-vascular diseases), and the other half read a text highlighting positive aspects of foods (e.g., eating healthy foods contributes to greater vitality and performance). Participants then indicated their preference between a regular granola bar and a nutrient-added granola bar. We found an interaction, $F(1, 253) = 7.55$, $p < .01$, such that preference for the more nutritious granola bar was higher in the absence (vs. presence) of calorie information for people under a negative framing ($M = 4.13$ vs. 3.42, $p < .001$), but not for people under a positive framing ($M = 2.99$ vs. 3.07, $p = .67$).

Study 6 ($n = 244$ UK respondents) tested a potential intervention. We examined whether a visual display showing the proportion of healthy and unhealthy nutrients in a food can counteract the negative effect of calorie posting. Participants were assigned to one of three conditions (no information vs. calorie vs. calorie and visual display) and evaluated the nutritional value of six foods regrouped in three pairs of more vs. less nutritious foods with similar caloric content (e.g., almonds vs potato chips). We found an interaction such that compared to the no information condition, calorie posting alone reduces the perceived nutritional value of the more nutritious foods ($M = 4.22$ vs. 4.57, $p < .01$), but the association of calorie information and visual display of nutrients does not ($M = 4.43$ vs. 4.57, $p = .30$). The perceived nutritional value of the less nutritious items was unaffected.

Our research demonstrates a pervasive "calories-must-be-bad" bias. Health policies that focus heavily on calorie information can hurt a relatively uninformed population. We suggest to emphasize more positive aspects of nutrition in behavioral nudges towards healthier eating.

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Beyond Whether to Give: Using Continuous Requests to Increase Donation Rates

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EXTENDED ABSTRACT

How does the presentation of donation requests influence donation rates? Across five incentive-compatible studies (N=4314), we present and test an approach to increase donation rates by shifting the request from a binary decision of "whether to give", to a continuous decision of "how much to give." When a donation decision is presented on the same continuum (e.g., $1/$5/$10 or none), the option not to donate becomes the stingiest of many possible options. This, in turn, increases donation rates.

In Studies 1-2 participants were entered to win a $25 bonus of which they could donate a portion to a charitable organization. The binary request was a choice of whether to donate or not. The continuous request was an expanded choice set of one of several donation amounts ($1, $5,…,$25, or none).

Study 1a. 603 participants were randomly assigned to either a Binary Choice, Expanded Choice, or Higher Expanded Choice condition. Participants in Binary Choice made a choice of whether or not to donate. If they chose to donate, they were then taken to a second page on which they could indicate the amount they wanted to donate (out of $25). Participants in Expanded Choice chose from seven "Yes" options ($1/$5/$10/$15/$20/$25/"another amount") or "No". As a robustness check, Higher Expanded Choice included the same options as Expanded Choice excluding "$1".

Providing initial evidence for our hypothesis, donation rates were higher in Expanded Choice (71.1%) than in the Binary Choice condition (50.3%), $p<.001$. Moreover, our effect did not hinge on the $1 option: donation rates were also higher in Higher Expanded Choice condition (65.2%) than in the Binary Choice condition, $p=.002$.

Study 1b tested an alternative explanation: Because Binary Choice required two steps instead of one, this additional effort may have decreased donation rates. Study 1b included a Single Stage Binary Choice condition to test this possibility. 302 participants were randomly assigned to a Binary Choice, Expanded Choice, or Single Stage Binary Choice condition. Participants in Single Stage Binary Choice were given a binary choice to donate but next to the "Yes" option, participants could enter the amount that they would donate.

As before, donation rates were higher in the Expanded Choice (55.9%) than in the Binary Choice condition (33.7%), $p=.001$.

Ruling out an additional effort account, donation rates were about the same in the Single Stage Binary Choice (33.3%) as the Binary Choice condition, $p=.96$, and lower than the Expanded Choice condition, $p=.001$.

Study 2. Did continuous choice increase donation rates simply because it provided additional donation options? Study 2 tested whether our effect was due to continuous options or multiple options. Specifically, we compared to a request with multiple noncontinuous options.

701 participants were again offered a donation opportunity, but in this study, there were 3 eligible charities. Participants were randomly assigned to either a Binary Choice or Noncontinuous Expanded Choice condition in which each charity was listed as separate options. All participants were aware that there were 3 charities to which they could donate. If participants chose to donate in either condition, they were then taken to a second page on which they could indicate the amount they wanted to donate (out of $25).

As predicted by our account, there was no difference in donation rates between the Binary Choice (54.0%) and Noncontinuous Expanded Choice (53.8%) conditions, $p=0.95$. Thus, it is not providing multiple donation options that seems to increase donation rates, but providing continuous options.

Study 3. Because we wanted to provide all participants an opportunity to donate, Studies 1-2 provided a potential windfall/bonus from which participants could donate. Study 3 instead examined contributions of time/effort to see if our effect extended beyond these windfall contributions.

1206 participants considered completing one of three surveys that increased in length (demographics; demographics and internet use; or demographics, internet use, and political attitudes) to defend net neutrality. (All participants were aware that these were the three surveys they could complete.) Importantly, these surveys were presented such that it was clear that these options were also continuous (e.g., a survey of demographics, internet use, and political surveys is a greater length than the survey of demographics and internet use which is a greater length than the survey of demographics only). Participants either saw a Binary Choice request in which they chose whether to complete a survey, or a Continuous Choice request in which the three surveys were separately listed.

Conceptually replicating our effect with donations of time and effort, survey completion rates were higher in the Continuous Choice (67.8%) than in the Binary Choice condition (53.7%), $p<.001$.

Study 4. Of course, not all requests are naturally on the same continuum. Can a noncontinuous request be transformed into a continuous one? 1502 participants were asked to complete an action for a prosocial cause (sign a petition, support an organization on Facebook, or write an email to a representative). (All participants were aware that these were the three actions they could complete.)

Participants either saw a Binary Choice request in which they chose whether to act, a Noncontinuous Choice request in which participants chose from one of the three actions or none, or a Continuous Choice request in which participants saw the same options as Noncontinuous Choice but with artificial values next to them intended to induce a continuum for the actions (i.e., 15 points, Bronze level action; 30 points, Silver level action; 50 points, Gold level action).

Completion rates were no different in the Binary Choice and Noncontinuous Choice conditions, $p=.29$. However, completion rates were higher in the Continuous Choice than in both the Binary Choice condition, $p=.005$, and the Noncontinuous Choice condition, $p=.09$.

Our findings offer clear recommendations for policy makers by illuminating that continuously framed requests increase engagement.

Fighting Planned Obsolescence Practices and Excessive Consumption: The Positive Effect of Pre-Purchase Product Reparability Communication on Consumers' Attitude

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EXTENDED ABSTRACT

Durable goods, electronics and electrical equipment are growing areas of waste generation (Kumar et al., 2017; Subramanian, 2000), due to excessive consumption (McCollough, 2010) and planned obsolescence (Gultinian, 2009). Activist associations and European policy suggest solutions against planned obsolescence, including (informing about) repair (e.g., EESC, 2014; les Amis de la Terre, 2010). Repair is a way to slow down product devaluation and a promising solution to extend the lifespan of products. Researchers have investigated consumers' incentives to have their products repaired which depends on several factors, including perceived inconvenience, lack of trust in repair efficacy, perceived cost, and product residual value (Cox et al., 2013; Scott & Weaver, 2014). Yet, little is known about the impact of pre-purchase product reparability communication on consumers' attitude and its underlying processes. Nor do we know whether manufacturers adopting a design for reparability strategy should communicate on product reparability at the time of purchase; as for instance the Groupe SEB, a French manufacturer of small household appliances, that started to communicate about the reparability of their products (www.seb.fr).

We first postulate that product reparability communication positively influences consumers' beliefs about the brand's social responsibility (i.e., CSR beliefs) (H1). A design for reparability strategy is one approach a brand can adopt to reduce the environmental impact of a product throughout its life cycle (Maxwell & van der Vorst, 2003, Scott & Weaver, 2014); reflecting its commitment to preserve the environment, which positively influences consumers' CSR beliefs. Then, we draw on the perceived quality literature that is a key determinant of consumption choices (Zeithaml, 1988), satisfaction, attitude and reputation (Lutz, 1975; Selnes, 1993). Product quality includes several dimensions among which two seem particularly relevant to the repair context: durability (i.e., amount of time before the product deteriorates or needs to be replaced) and reliability (i.e. likelihood of product malfunction) (Garvin, 1984). We predict that product reparability enhances product durability, and hypothesize that consumers' perception of product durability mediates the positive influence of product reparability communication on consumers' attitude (H2). A company CSR support creates a reputation of reliability and honesty that prompts consumers to assume that the product is of high quality (McWilliams & Siegel, 2001). Perceived brand quality mediates the relationship between CSR performance and brand preference (Hu et al., 2012). Therefore, we suggest that consumers associate reparability to a form of CSR activity, which enhances their CSR beliefs and in turn their perceptions of the product durability (i.e. products built to last because completely repairable) (H3). Finally, perceived product reliability (i.e., second important dimension of quality) moderates these effects (H4a and b). When consumers perceive the product as more reliable, the magnitude of the positive impact of reparability communication on CSR beliefs and on perceived product durability decreases. The strong emphasis on product reparability for products that are perceived as highly reliable may raise suspicion about the firm's intention to communicate about it (Brown & Dacin, 1997; Sabbaghi et al., 2016). However, the same emphasis on product reparability for products that are perceived as less reliable might be seen as an effort by the brand to be transparent, establishing positive relationships between consumers and corporations (Reynolds & Yuthas, 2008).

We tested our hypotheses through three online between-subjects experiments, with respectively 419, 425 and 425 respondents (age between 17 and 79). We manipulated the absence versus presence of product reparability communication. We also used replicates (i.e. branded products varying in terms of their level in the range and of their brand concept) to enhance external validity (Achabou & Dekhili, 2013; Park et al., 1986). We used a fictitious brand in studies 1 and 2 but real brands in study 3. After a random assignment to one of the conditions, respondent answered a few questions.

Results confirm that product reparability has a positive and significant effect on CSR beliefs in all three studies (H1) (β_{study1}= 2.38 (se=.301), t= 7.78, $p<.001$; β_{study2}= 2.43 (se=.31), t= 7.91, $p<.001$; β_{study3}= 2.18 (se=.33), t= 6.62, $p<.001$). In support of H2, results show that product durability mediates the impact of reparability communication on consumers' attitude in studies 1 and 2 (non significant in study 3). H3 is supported in all three studies: CSR beliefs mediate the reparability communication–product durability relationship. In support of H4a, product reliability moderates the 'reparability-CSR beliefs' path and the index of moderated mediation is significant in all three studies (IMM_{study1}=-.05 [-.10, -.01]; IMM_{study2}=-.06 [-.12, -.02]; IMM_{study3}=-.04 [-.09, -.001]). Finally, H4b receives support in studies 1 and 2: product reliability moderates the 'reparability->product durability' path, with the index of moderated mediation significant in studies 1 and 2 (IMM_{study1}=-.05 [-.10, -.01]; IMM_{study2}=-.06 [-.12, -.01]; IMM_{study3}=-.01 [-.06, .02]).

Single paper meta-analysis (SPM) confirms all hypothesized relationships between our variables of interest, based on overall effect size (ES) estimates (e.g., Braver, Thoemmes, & Rosenthal, 2014).

This research offers theoretical insights and practical implications. We provide first evidence for the importance of pre-purchase product reparability communication in consumers' evaluation of a branded product. Contrary to existing studies, we focus on the importance consumers attach to a repairing possibility at the time of purchase, rather than at the end of the product life cycle (McCollough, 2010). Additionally, we put forth CSR beliefs and perceived durability as underlying processes. We contribute to practice by showing that reparability communication is a way for brands to signal their CSR activities, which translates into improved perceptions of their product durability. Communicating about the 'design for reparability' strategy might offer companies a competitive advantage, increasing consumers' preferences before purchase. Finally, our study also provides some insights for policymakers on the use of pre-purchase reparability communication as a measure against planned obsolescence (Maitre-Ekern & Dalhammar, 2016). Reparability information should indeed be brought to the consumer's attention in a visible and legible manner before purchase.

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Customer Referral Programs: How Demographic Similarity, Risk Profile of the Product, and Referral Channels Influence Referral Success

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EXTENDED ABSTRACT

Customer referral programs (CRPs) have become a popular, effective and cost-efficient acquisition tool (e.g., Biyalogorsky, Gerstner, and Libai 2001). Prior research on CRPs has been widely studied the fractions of referrals made that are successful, thereby neglecting unsuccessful referrals (e.g., Garnefeld et al. 2013). For example, a recommended insurance product could be rejected either by the referral receiver (e.g., no need for insurance) or the firm (e.g., poor health of the prospect). We address this gap and analyze potential drivers of successful referral likelihood (i.e., the acceptance of a referral by both the receiver and the firm).

Existing studies have suggested that the outcome of a referral is strongly affected by demographic similarity between the sender and the receiver (e.g., Brown and Reingen 1987). For example, Armelini, Barrot, and Becker (2015) have shown that demographic similarity increases the receiver's customer value. Other studies have found that demographic similarity also affects the sender's reward scrounging (Meyners et al. 2017). However, it is still not clear whether and how demographic similarity drives successful referrals. In this sense, our study differs considerably from prior work by analyzing the impact of demographic similarity on successful referral likelihood.

Second, referral behavior also depends on the *risk profile of the product* (Van den Bulte et al. 2018). Hereby, the perceived risk describes the degree of uncertainty (i.e., the probability of an unfavourable outcome) and consequences (i.e., the subjective expectation of a loss) (Laroche et al. 2004). For example, Jacoby and Kaplan (1972) found that life insurance customers perceive the physical risk to be higher than TV user. Until now, there is no evidence that the acceptance of a referral depends on the perceived physical risk associated with a recommended product. In addition, there is no evidence that the association between referral success and demographic similarity is being moderated by the risk profile of the product. Finally, it remains uncertain whether *personal communication channels* trigger more successful referrals than *impersonal communication channels*, since they are perceived as more diagnostic or probative in the context of purchase decisions (Lynch 2006).

We address those issues by using firm data acquired by a European direct insurer. The data encompass more than 60,000 referral receivers who were acquired through the firm's CRP between January 2010 and December 2016, as well as their referral sender. We additionally tracked various product types to test for differences in physical risk profiles. While *property insurance* covers objects such as cars (Staudt and Wagner 2018), *personal health or life insurance* affect health and well-being (Ericson and Syndor 2017). Therefore, personal insurance customers perceive the physical risk to be higher (e.g., reimbursement of hospital costs) than property insurance customers (e.g., mobile phone repairs) (dummy variable, with personal insurance covered as 1 and property insurance as 0). Similarly, we used four binary variables (match / no match) to indicate similarity: *age* (difference is not larger than five years), *gender* (i.e., both have the same gender), *household* (i.e., both are living in the same household) (Armelini, Barrot, and Becker 2015), and *marital status* (Wellman and Wortley 1990). Marital status similarity occurs when both the referral sender and receiver are either married or unmarried. With dissimilarity, one is married and the other is not. Following Nitzan and Libai (2011), we evaluate the *degree of similarity* between any two individuals by assigning a score of .25 points for each variable that was identical between any two individuals. The final score was the sum of these points, so that similarity ranges from 0 (no match) to 1 (full match). From the firm's database, we collect further the type of recommendation channel. Specifically, existing customers could voice a recommendation either through personal communication channels (e.g., telephone) or through impersonal communication channels (e.g., the firm's website) (dummy variables). We performed a logistic regression and used successful referral likelihood as dependent variable, where 1 represents successful referrals and 0 represents unsuccessful referrals (Barrot, Becker, and Meyners (2013). The data encompass sender-stated referrals that is the sender could name the receiver via telephone (i.e., personal) or via e-mail (i.e., impersonal) (Meyners et al. 2017) and the firm uses the same channel to contact the corresponding receiver. We focus on a single referral generated by the sender to avoid statistical problems in analyzing two-way peer influence within dyads (Van den Bulte et al. 2018).

First, our findings provide evidence that the likelihood of successful referrals substantially depend on demographic similarity between referral sender and receiver. Theoretically, this effect might result from the fact that homophilous sources are perceived as more credible and influential (Brown and Reingen 1987). Managerially, we propose that individuals living in the same household are particularly suitable to trigger successful referrals. Second, we find that successful referral likelihood is higher for low-risk products (i.e., property insurances) as compared to high-risk products (i.e., personal insurances). One explanation is that personal insurance is associated with high physical risk (Jacoby and Kaplan 1972). Another explanation is that only a small share of consumers has experience with high-risk financial services (Armelini, Barrot, and Becker (2015). Third, we find that the association between referral success and demographic similarity depends on the risk profile of the product. We show that low-risk products increase the likelihood of successful referrals, especially if the demographic similarity is low. Conversely, with high-similarity, high-risk products exhibit a significant higher likelihood of successful referrals as compared to low-risk products. This contingency suggests that the association between referral success and demographic similarity is unlikely to reflect mere homophily or passive matching. We also find that referrals made through personal communication channels (e.g., telephone) exhibit more conversions than those made through impersonal communication channels (e.g., website). Therefore, we suggest that insurance providers should promote the CRP primarily through personal communication channels (e.g., outbound telephone).

Ongoing data analysis attempts to attribute this difference to selectivity versus greater vividness and persuasiveness of various channels. In summary, our results enable firms to systematically increase the probability of successful referrals by triggering suitable customer segments and to actively manage recommendation channels.

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Conform or Disconform:
The Social Influence of Choice Versus Rejection Decision Framings

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EXTENDED ABSTRACT

Decisions between two options can be framed as either choosing the more preferred option or rejecting the less preferred one. Imagine you are choosing between two products A and B. Would you choose differently when you learn that another consumer who faced the same decision *chose* Product A versus *did not choose* Product B? Decision making literature has long explored how decision framings influence decision processes and outcomes in various contexts (Dhar and Wertenbroch 2000; Laran and Wilcox 2011; Perfecto, Galak, Simmons, and Nelson 2017; Shafir 1993; Sokolova and Krishna 2016). However, all this existing work focuses on the effect of *one's own* decision framings on one's behavior and has largely ignored how the framings of *others'* decisions influence one's behavior. The current research aims to begin to fill this gap by studying whether framing other's decision as a choice versus a rejection influences conformity.

Specifically, we propose that people are more likely to conform to another person's decision when the decision is framed as a rejection than as a choice. We further propose that this effect is driven by the differences in causal attributions for the decision. When consumers learn about another person's decision, they spontaneously make inferences about the cause underlying that person's decision and use these inferences to make their own decisions. They may attribute other's decision to either personal preference (i.e., she chose Product A because she personally likes Product A more than Product B; neither product is objectively better than the other) or product quality (i.e., she chose Product A because Product A is objectively better than Product B). We argue that the framings of other's decision influence the types of causal inferences people make, such that people are more likely to make quality inferences (versus personal taste inferences) when other's decision is framed as a rejection than as a choice. The increased quality inference, in turn, leads people to conform more to another person's decision.

Study 1 provided initial evidence for the decision framing effect in the context of dining. Participants were asked to choose between two full-course dinner menus. Before they made their decision, they were informed of a friend's decision either in a choice framing (e.g., your friend chose Menu A) or in a rejection framing (e.g., your friend did not choose Menu B). Participants then indicated which menu they would like to choose. As predicted, participants in the rejection condition (66.0%) conformed to the friend's decision more than those in the choice condition (51.0%, χ^2 = 4.634, p = .031). **Study 2** replicated this effect when participants had to choose between two aversive stimuli, such as a cocktail infused with snake and a cocktail infused with scorpion ($F(1, 403)$ = 6.145, p = .014).

Study 3 tested the robustness of this effect by employing a different type of manipulation. Instead of explicitly framing the decision for participants, we described a typical shopping scenario and let participants form their own interpretations about other's decision. Specifically, participants imagined observing another consumer holding two types of ramen and examining them side by side. In the end, they read "that customer puts Ramen A in the shopping basket" (i.e., a choice) or "that customer puts Ramen B back on the shelf" (i.e., a rejection). Then, participants indicated which ramen they would like to choose. Replicating our previous findings, the

rejection framing increased conformity (70.9%) compared with the choice framing (52.6%, χ^2 = 7.098, p = .008). This study also ruled out an alternative explanation, namely, people might infer that another customer has a stronger preference for the chosen option over the unchosen one when her decision is framed as a rejection (vs. a choice). We measured preference strength and did not find significant difference across conditions, suggesting that preference strength was not the driver of this effect.

Study 4 tested the proposed mechanism. It measured participants' causal attributions for other's decisions and found that people were more likely to make quality inferences (versus personal taste inferences) when other's decision was framed as a rejection 46.6% than as a choice (31.6%; χ^2 = 4.717, p = .030). These inferences mediated the effect of decision framings on conformity (z = 2.08, p < .05), providing empirical support to our attribution account.

According to our theorizing, the decision framing effect should occur when people are uncertain about whether the alternatives in a choice pair differ in terms of quality or personal preference. In situations where people hold strong belief about whether a choice pair is a matter of quality or a matter of personal preference (Spiller and Belogolova 2016), or in situations where they are informed of how the alternatives differ, people are unlikely to make differential inferences about the cause of other's decision. Consequently, the rejection framing should not increase conformity under these conditions. **Study 5** tested these predictions with coffee, using a 2 (Framing: Choice vs. Rejection) by 3 (Inference: Quality vs. Taste vs. Control) between-subjects design. The two control conditions were similar to those in our previous studies. Participants in the quality (taste) condition were additionally told that two types of coffee differ in terms of quality (personal taste). A logistic regression revealed a marginally significant interaction (B = -.985, Wald test = 3.148, p = .076). Unpacking this interaction, the decision framing effect was significant the control condition, but not in the quality or the taste conditions.

In **Study 6,** participants had to make an incentive-compatible decision between two bed sheets based on an online customer review, which described the customer's decision as either a choice or a rejection. Again, participants conformed more to the customer's rejection than choice (71.6% vs. 62.4%, χ^2 = 3.953, p = .047).

In sum, across six studies and more than 1700 participants, this research documents a novel decision framing effect on conformity. By doing so, it bridges existing literature on decision framings and social influence, and offers a novel contribution to both literatures.

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Irresistible Discount: Physiological Evidence that Deals are Inherently More Arousing for Interdependents!

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EXTENDED ABSTRACT

The ubiquity of promotions and deals have prompted much research in the marketing literature on understanding segments of consumers who would be attracted to deals and how consumers respond to deals. Deal–proneness has been shown to correlate with demographic factors (e.g. income level), purchasing factors (e.g. number of shopping trips) (Barone and Roy 2010) and situational variables, e.g. Lalwani and Wang, (2018) show that individuals' cultural orientation matters towards such deals. Most of the research, has presented a motivational account for consumers taking advantage of deals.

In this research, we deviate from the motivational argument and propose a physiological argument, that for some consumers, chancing upon a deal actually leads to greater physiological arousal, making it difficult for them to resist taking advantage of a deal. We propose that deals are inherently more arousing for interdependent (vs. independent) consumers, who are more context dependent. Prior research shows that people who are context dependent tend to think that the world is ever-changing and there is a lack of permanence in life (Nisbett et al. 2001). We argue that this belief, leads to an urge to respond immediately, when consumers "chance' upon a good deal. Physiologically, this manifests as greater arousal in them. A feeling of non- permanence should lead to greater arousal and a stronger desire to "grab" the deal while it is here. Prior research has shown that arousal manifests as an automatic physiological response in reaction to changes to a stimulus (Pham 1996; Sanbonmatsu and Kardes 1988). It also shows that elevated arousal diminishes cognitive capacity and results in heuristic or superficial processing (Gorn et al. 2001; Sanbonmatsu and Kardes 1988; Pham 1996).

Findings from this research present a different perspective on interdependent (vs. independent) consumers. Prior research has shown that interdependents are always in control of their enviroenment. Lalwani and Wang, (2018) showed that interdependents (vs. independents) are better able to regulate their behavior. Chen, Ng and Rao (2005) showed that Easterners (who tend to be more interdependent) exhibit greater self-control than Westerners (who are generally seen as independent).This research shows that there may be times (such as, in the context of deals) when greater context dependency in interdependents actually impedes their ability to regulate their behavior and this effect is anchored in one's physiological reaction and therefore, much harder to defend.

We argue that interdependents are more likely, than independents, to react to the notion that the deal is special and "non-permanent" as it fits their underlying worldview.

Drawing from this stream of literature, we propose that interdependents (vs. independents) would __*feel more aroused*__ when they chance upon a deal and this leads to __*greater impetus to purchase*__ the product on sales. A series of three studies were conducted to test our proposition.

Study 1 (N= 56) tests the main hypothesis that interdependent (vs. independent) are differentially aroused by deals. It's a 2 (self-construal: interdependent versus independent) X 2 (Promotion: "No Sale" versus "Sale") between-subjects design. Self-construal was primed by showing participants a collage of cultural icons following prior studies (see Chen et al 2005). Arousal was measured using a skin conductance sensor. As different individuals have different baseline skin conductance levels, level of arousal was measured by calculating the difference between the peak latency of skin conductance response (phasic SCL) when they were viewing the promotional advertisement and the mean skin conductance (tonic SCL) during the final 10 seconds when the demographic/ control questions were answered. We find a significant the 2- way interaction ($F(1,52)=4.04$, $p<.05$). Specifically, participants in the interdependent prime condition exhibited significantly higher level of conductance level in the sales ($M=.601$) versus "no-sales" condition ($M=-.04$; $F(1,53)=4.97$, $p<.05$). On the other hand, the participants primed with independent self-construal did not show any difference in their response across both conditions ($M_{sale}=-.02$; $M_{no\_sale}=.17$; $F(1,53)=.38$, $p>.1$). This study showed that interdependents are more aroused when they encounter a price promotion as compared to independents.

Study 2 (N= 84) The objective of study 2 is to see 1) if heightened arousal leads to greater purchase intention, 2) test if effect depends on how the deal was framed and 3) use a more direct measure of self-construal. It was a 2 (Self-construal: Interdependent versus Independent) X 2 (Frame: 1-for-1 versus 50% off for two) between-subjects design. Results revealed that interdependents demonstrated significantly higher degree of arousal compared to independents for both price frames (1-for-1: $F(1,80)=5.90$, $p<.05$; Percent off: $F(1,80)=12.80$, $p<.01$). The same pattern of results was obtained for purchase intention (1-for-1: $F(1,80)=10.84$, $p<.01$; Percent off: $F(1,80)=11.67$, $p<.01$). Mediation analysis further show that the effect of self-construal on purchase intention was mediated by arousal (CI: .21 to .73). The results show that interdependents (versus independents) experience greater degree of arousal when they encounter a deal, and this leads to higher purchase intention.

Study 3 (N =216) Study 3 also aims to refute a potential alternative explanation. For instance, one may argue that deals and discounts can convey negative impression of cheapness and independents would avoid deals to maintain a good impression of oneself (Ashworth, Darke, and Schaller, 2005). The experiment employed a two factor: (self- construal prime: interdependent vs. independent) x (promotion: sale vs. non-sale) between- subject design. ANOVA shows that the interaction between self-construal and promotion on arousal was significant ($F(1,212)=3.74$, $p=.05$). Contrasts showed that in the sale condition, interdependents ($M =4.3$) exhibited significantly higher level of arousal compared to independents ($M =3.81$; $F(1,212) = 4.04$, $p<.05$). Similar comparison was not significant in the no-sale condition ($M_{interdependent}=3.11$, $M_{independent}=3.30$; $F(1,212)=.526$, $>.05$)

Alternative explanations. To test if impression management concerns may explain the results, ANOVA on the mean of the two impression management items (concern about being seen as "cheap" and "stingy") was added as a covariate to the above-mentioned analysis. ANOVA on the mean of the 2 items (aroused and excited) with impression management concerns as the covariate showed that the interaction between self-construal and promotion on arousal was still significant ($F(1,211)=3.79$, $p =. 05$).

Findings from three studies provided converging evidence to support our proposition that deals are more likely to elicit a deeper, spontaneous physiological reaction among interdependents (versus independents).

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'Fashionably' Late: Signaling Sociometric Status
Through Conspicuous Consumption of Leisure Time

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EXTENDED ABSTRACT

This research examines how people react to individuals who arrive late to social gatherings. Anecdotal evidence suggests that some people arrive very late to social gatherings and they are considered "fashionable", implying that there might be an upside to being "fashionably late". What would that be?

Costly signaling theory (Grafen 1990) maintains that individuals engage in behaviors that are costly to signal others valuable information (Bird and Smith, 2005). Just like a peacock's tail, arriving late to a party might signal valuable information about one's sociometric status – the respect, admiration, and voluntary deference individuals are afforded by others (Anderson et al., 2015). That is, tardiness might signal that one has sufficient resources (popularity, prevailing social network) to be able to afford to lose current socializing opportunities. A proximal mechanism that we propose is that when one observes a target arriving late to a social gathering, the observer would infer that the target arrives late because she has prior social engagement, and thus is likely to have a relatively large social network and be popular in it. Consequently, others might be motivated to affiliate with these high status late-comers.

Mimicry behavior is common, especially when people are trying to affiliate with others (e.g., Cheng and Chartrand 2003). We anticipate that high sociometric status of targets, as signaled by their late arrival times, would make their consumption choices more likely to be imitated, especially for observers who have a high chronic desire for status. The above- mentioned propositions were tested across six studies.

Study 1a was conducted at two social gatherings ($N = 61$) at a European university. As each student joined the event, a research assistant recorded the arrival time and gave a short survey to the student, assessing his/her sociometric status (Adler et al. 2000). Sociometric status positively predicted arrival time, $p = .02$.

In Study 1b, 197 American adults were asked to imagine going to a party and read a table listing the arrival time of 31 attendees. For an on-time target and a target who arrived 90 min late, participants were asked to judge the target's sociometric status (Adler et al. 2000) and indicate the degree to which they agreed that the target had the largest number of friends. The very late (vs. on-time) target was perceived as having higher sociometric status, $p = .01$ and was more likely to be perceived as having the largest number of friends, $p < .001$.

Study 1c ($N = 191$ American adults) was similar to Study 1b except the following. First, we used a between-subjects design instead of a within-subjects design. Second, after judging the sociometric status and the likelihood of having the largest number of friends for either the very late or the on-time target, participants were asked to indicate the degree to which they agreed that the target engaged in social activities before coming to the party (prior social engagement) and academic or work activities before coming to the party (prior academic or work engagement). The very late (vs. on-time) target was perceived as having higher sociometric status, $p < .01$, and was more likely to be perceived as having the largest number of friends, $p < .01$. Moreover, the very late (vs. on-time) target was more likely to be perceived as having prior social engagement, $p < .001$, but not prior academic or work engagement, $p = .25$. Finally, there was an indirect effect of arrival time on each of the two sociometric status indicators, through the effect of prior social engagement, ps $< .05$.

Study 2 ($N = 81$ Turkish university students) was similar to Study 1b except that we added affiliative behavioral intention as an additional DV. The very late (vs. on-time) target was perceived as having higher sociometric status, $p = .001$. Moreover, participants were more likely to show affiliative behavioral intention toward the very late (vs. on-time) target, $p = .02$. Importantly, there was an indirect effect of arrival time on affiliative behavioral intention through the effect of sociometric status perception, $p < .05$.

In Study 3, 136 Turkish university students were first asked to imagine that they attended a party and then told that an attendee showed up to the party on-time or 90 min late, and brought a six-pack of Hoegaarden beer to the party. Participants then indicated their intention to try that beer and completed a measure of chronic desire for status (Cassidy and Lynn 1989). Multiple linear regression with imitation intention as the criterion, and arrival time and chronic desire for status as predictors revealed a main effect of arrival time, $p < .01$, as well as an interaction effect, $p < .01$; the beer brand that the target brought to the party was more likely to be chosen when he arrived late (vs. on-time) for participants whose chronic desire for status was high, $p < .001$, or moderate, $p < .01$, but not for those whose chronic desire for status was low, $p = .88$.

In Study 4, we examined the mimicry behaviors of MBA graduates of a European business school attending an informal party. Two confederates wearing different t-shirts showed up at different times (7:30 pm, 9:30 pm). At 10:00 pm another confederate told the attendees that there was going to be raffle and the winner would get a t-shirt. Participants were asked to choose one to get as the prize should they win the raffle. Out of the 23 participants who returned a completed form, 18 (78%) chose the t-shirt that the late-arriving person wore, which was different from chance, $p < .01$.

In future research, it would be worthwhile to examine whether and under what conditions people would deliberately adjust their arrival time to appear popular, having high sociometric status. In addition, although our central proposition has received empirical support in both Turkey and the United States, it would be theoretically informative to further examine generalizability of our findings in other cultures where punctuality norms might differ.

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The Interactive Effect Between Goal Specificity and Implemental-Deliberative Mindset on Energy-Saving

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EXTENDED ABSTRACT

Consumers' energy-saving behavior is still at a nascent stage because the long-term saving often comes with a higher short-term price (White and Simpson, 2013). This research examines how goal specificity and implemental-deliberative mindset interactively affect consumers' tendency for long-term energy-saving.

Saving goals can be set at a specific number (e.g., "save $50 a month") or a range (e.g., "save $30-$70 a month"). Previous research examining goal specificity has offered mixed findings. While some studies show that a specific goal is more effective (Soman and Zhao 2011), others find that a range goal is more effective (Scott and Nowlis 2013). In this research, we predict that both types of goal can be effective in the context of energy-saving, depending upon consumers' implemental-deliberative mindset.

A fundamental difference between implemental and deliberative mindsets is how the information is processed (Fujita et al. 2017). Implemental mindset focuses on when, where, and how to pursue a goal, whereas deliberative mindset focuses on pros and cons of a goal and are more open to all types of information. We propose that under implemental mindset where detailed information is desired, a specific goal is more effective than a range goal in increasing consumers' goal motivation for energy-saving. In contrast, under deliberative mindset where consumers are open to a wide range of information, a range goal is more effective in increasing motivation for energy-saving. Further, drawing on previous research that high motivation for goal pursuit increases the search for relevant and diagnostic information (Petty and Cacioppo 1986), the match between goal specificity and mindset will increase the weight of information relevant to savings goal, thus increasing tendency for energy-saving behavior.

Two laboratory experiments and one field study were conducted to test our predictions. Study 1 (N=170) was conducted online using MTurk. This study tends to test the match between goal specificity and mindset on consumers' tendency to purchase of energy-saving products, and the mediating role of perceived importance of goal-relevant information. Participants were randomly assigned to a 2 (mindset: implemental vs. deliberative) × 2 (goal specificity: specific vs. range) between-subjects design. Goal specificity was manipulated by assigning participants to either a specific-goal ("save $50 a month") or a range-goal ("save $30-$70 a month") for utility-saving. Participants in the implemental-mindset condition were asked to write important steps including when, where, and how to accomplish the goal, whereas those in the deliberative-mindset condition were asked to write pros and cons of pursuing the goal (Brandstätter and Frank 2002). They were then asked to choose between an energy-saving dishwasher and a conventional dishwasher and rated the importance of (1) purchase price, (2) lifetime-running cost, (3) annual-operation cost, and (4) green-rating. The results showed a significant interaction between goal specificity and mindset on product choice (β=.93, Wald=10.34, p<.01), indicated the effectiveness of match on enhanced choice of energy-saving dishwasher (implemental: $M_{specific}$=95.8% vs. M_{range}=78.9%; χ^2 (1)=5.89, p=.02; deliberative: $M_{specific}$=76.3% vs. M_{range}=95.7%; χ^2 (1)=6.84, p=.02). These effects were mediated by perceived importance of the three long-term saving-related attributes over purchase price (1.35, 95% CI [.51 to 2.83]).

The purpose of study 2 (N=524) is threefold: (1) to further test the mediating role of perceived importance of goal-relevant information by showing an attenuation of the match effect after energy-saving information is explicitly highlighted across conditions; (2) to provide a more rigorous test in a between-subjects design; and (3) to enhance the external validity of our findings using ads to induce goal specificity and mindset. Participants were randomly assigned to a 3 (product type: conventional vs. energy-saving vs. energy-saving with highlighted information) × 2 (mindset) × 2 (goal specificity) between-subjects design where they saw an ad for a dishwasher and then evaluated the dishwasher. As expected, we replicated previous findings in both the conventional and energy-saving conditions when the energy-saving information was not highlighted. Specifically, for the conventional dishwasher that is inconsistent with the energy-saving goal, the match between goal specificity and mindset reduced participants' purchase intentions toward the dishwasher (F(1, 164)=26.17, p<.001). For the energy-saving dishwasher that is consistent with the energy-saving goal, the match between goal specificity and mindset enhanced participants' purchase intentions toward the dishwasher (F(1, 170)=14.71, p<.001. However, these effects were attenuated when the energy-saving information was highlighted (F(1, 178)=.26, p=.61), showing that match no longer mattered when energy-saving information was explicitly highlighted.

To enhance the generalizability of our findings, we conducted a field study to examine the interactive effect between goal specificity and mindset on consumers' actual utility saving during November and December in 2012. A total of 532 households in Shanghai, China, participated this study. They were randomly assigned to a 2 (mindset: implemental vs. deliberative) × 2 (goal specificity: specific vs. range) between-subjects design. The actual utility consumption (KWH) of these households were collected in 2013. Again, we replicated previous findings that the match between goal specificity and mindset significantly reduced participants' utility consumption (interaction between mindset and goal specificity: F(1, 527)=11.24, p=.001; utility consumption under implemental mindset: $M_{specific}$=155.55 vs. M_{range}=232.44, F(1, 527)=4.66, p=.03; utility consumption under deliberative mindset: M_{range}=165.69 vs. $M_{specific}$=252.33, F(1, 527)=6.84, p=.01). Our further examination of their utility consumption in the follow-up years (2014 to 2016) showed that the reduction in utility consumption, as a result of the match between goal specific and mindset, persisted over time.

Taking together, our research contributes to the goal literature by examining specific vs. range goals in the context of green consumption and introducing implemental-deliberative mindset as an important moderator. Further, our research advances our understanding of consumers' decision-making in the green consumption domain by uncovering how perceived importance of goal-relevant information can be enhanced using behavioral interventions based on goal specificity and mindset.

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The Effects of Local-Global Identity on Preference Between Purchase Versus Rent Decision: The Role of Settler-Traveler Mindset

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EXTENDED ABSTRACT

Renting products is on the rise because purchasing is no longer the ultimate expression of consumer desire (Bardhi and Eckhardt 2012). In response, retailers increasingly offer both purchase and rental options for products, forcing consumers to make a choice between renting vs. purchasing. Two fundamental differences between purchase versus rental options are (1) time for consumption of the product, and (2) ownership rights of the product. Specifically, purchasing transfers ownership from seller to buyer for use of the object through its life, while renting retains ownership with the seller and only transfers right for use of the product to the buyer for a limited period (Bardhi and Eckhardt 2012). Given the importance of the phenomenon, in this research, we examine the role of a consumers' local/global identity and its effect on purchase versus rent decisions.

Research on local/global identity (Arnett 2002) suggests that consumers hold either a dominant local identity, i.e., identify with local traditions and culture [locals], or a dominant global identity, i.e., identify with global culture [globals]. In this research, we propose that locals (vs. globals) have greater preferences for purchase- (vs. rental-) options due to the activation of settler- (vs. traveler-) mindset. Previous research suggests that individuals either develop residential stability or a need for residential mobility. When individuals adopt residential stability, they tend to evoke a "*settler mindset*" and tend to choose closed, stable, and traditional social networks preferring long-lasting relationship with their surrounding environment including objects and people. Alternatively, when individuals focus on residential mobility, they tend to evoke a "*traveler mindset*", preferring transient social networks and engaging with new environments they are exposed to (Oishi 2010) and trying to choose objects and people that don't hold them back to a single residential location. Thus, we suggest that locals with attachment to their local community are likely to evoke a *settler mindset*. However, globals who value global community are likely to have an activated *traveler mindset.*

When making purchase-or-rent decisions, we propose that locals will have settler-mindset, motivating them to seek options favoring long-term stability and permanence in relationship (Bardhi et al. 2012) i.e., preferring a purchase-option (vs. rent-option). In contrast, globals will evoke traveler-mindset, motivating them to seek options favoring mobility. Such individuals may be more likely to perceive the value of ownership as burdensome, thus increasing preference toward a rent-option (vs. purchase-option).

Four laboratory experiments and one field study were conducted to test our predictions. Study 1a (N=96) tested our core thesis of effects of local/global identity on preference for purchase-or-rent decisions. We manipulated participants local/global identity using a sentence unscrambling task (Zhang and Khare 2009). Participants then indicated their preference for a purchase-or-rent decision for a beach-volleyball. Supporting our prediction, results showed that locals (vs. globals) had greater preference toward the purchase-option (M_{local}=5.83 vs. M_{global}=4.90; $F(1, 94)$=4.25, p=.04). Study 1b (N=214), with a 2 (identity: local vs. global) × 2 (choice option: purchase vs. rent) between-subjects design, aimed to provide a more

rigorous test in a between-subject design. The local/global identity was manipulated as in study 1a. Participants were asked to indicate their likelihood of purchasing [renting] a textbook for their course. As expected, we replicate findings that for the purchase-option, locals showed greater likelihood to purchase the textbook (M=5.01) than globals (M=3.25; $F(1, 210)$=18.07, p<.001), whereas for the rent-option, globals showed greater likelihood to rent the textbook (M=5.35) than locals (M=3.60; $F(1, 210)$=72.14, p<.001).

Study 2 (N=83) tested the underlying mechanism of settler-traveler mindset. Local/global identity was manipulated as in study 1a, and we measured settler-traveler mindset. Results showed that locals (vs. globals) showed greater preferences toward a purchase-option (M_{local}=4.22 vs. M_{global}=3.19; $F(1, 81)$=4.20, p=.04). These effects were mediated by a more settler-mindset over traveler-mindset (.27, 95% CI [.01, .73]). Study 3 (N=250), with a 3 (mindset: settler vs. traveler vs. control) × 2 (identity: local vs. global) between-subjects design, aimed to further test the role of settler-traveler mindset by contextually varying the potential mediator. We predict that externally activating settler-mindset makes globals behave like locals. Alternatively, activating traveler-mindset makes locals behave like globals. Identity manipulation was the same as in previous studies. Settler-traveler mindset was manipulated by externally evoking related settler [traveler] thoughts. Participants in the control-condition were asked to review their daily routine and write down their thoughts. We replicated previous findings in the control-condition that locals had greater preference toward the purchase-option ($F(1, 82)$=10.69, p<.01). We then compared preference toward purchase-or-rent option of participants in the settler-mindset (vs. control) condition, and found that globals showed greater preference toward purchase-option when activating settler-mindset (M=3.76) than those in the control-condition (M=2.27; $F(1, 162)$=9.74, p<.01). However, locals' preferences toward a purchase-option was unaffected (p=.96). When also compared preference toward purchase-or-rent option of participants in the traveler-mindset (vs. control) condition, and found that locals showed less preference toward a purchase-option when activating traveler-mindset (M=2.39) than those in the control-condition (M=3.81; $F(1, 164)$=11.37, p=.001). However, globals' preference toward a purchase-option was unaffected (p=.83).

We conducted a field study to examine local/global identity effects on consumers' actual purchase-or-rent preferences. Participants (N=259) were from a large real-estate website with sales-lists and rental-lists for housing. We measured their local/global identity, and frequency of looking at the sales-list and rental-list for housing. Replicating previous findings, results revealed that locals tend to have greater preferences for purchase-option (β=.16, $t(218)$=2.43, p=.02), whereas globals tend to have greater preferences for rent-option (β=-.15, $t(218)$=2.12, p=.04).

Taken together, our research contributes to the cross-cultural literature by identifying the relationship between local/global identity and settler-traveler mindset. Our research findings also contribute to the purchase-or-rent literature by identifying how important consumers' local/global identity influences a key effect in the literature. Further, by uncovering the relationship between local/global identity

and settler-traveler mindset, we show the mediating role of settler-traveler mindset on the relationship between local/global identity and preference for purchase-or-rent decisions, but also identify contexts in which preference for purchase-or-rent decisions will be mitigated by factors that influence the settler-traveler mindset.

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We Succeeded Together, Now What: Relationship Power and Sequential Decisions in Couples' Joint Goal Pursuits

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EXTENDED ABSTRACT

The current research seeks to explore how successful progress towards a joint goal pursued by married couples (e.g., spouses saving money for retirement) affects subsequent individually-made decisions that impact progress towards the joint goal (e.g., deciding how to spend one's money in the absence of the partner). We demonstrate that whether the partners continue to work towards the joint goal or choose goal-inconsistent actions depends on the amount of relationship power they possess (i.e., the ability of one partner in a relationship to influence the other and to make the majority of the decisions in the relationship; Dunbar 2004).

Prior work has suggested that high relationship power is associated with decreased consideration of the partner (Keltner et al. 2003; Simpson et al. 2015), so we expect that low-power partners will be more likely to consider the impact of their individual decisions on the joint goal. Since considering the impact of one's actions on goal pursuit has been shown to lead to more goal-consistent choices (Baumeister and Heatherton 1996; Nenkov, Inman, and Hulland 2008), low power partners should be less likely to engage in behaviors inconsistent with the joint goal after successful joint goal progress, as compared to high power partners. In sum, we predict that after successful joint progress, lower relationship power partners would be more likely to continue working towards the joint goal and less likely to make individual decisions that are inconsistent with it, than their higher relationship power counterparts.

Study 1 (n = 139, 62% male) tests our predictions by using lab-created dyads and a consequential dependent variable (persistent effort towards solving anagrams) and manipulating both relationship power (by assigning lab participants to dyad teams and assigning one member in each pair to be a Team Manager, who makes all the decisions, and the other one to be a Team Secretary; adapted from Bitterly et al. 2019) and joint goal progress (by providing positive feedback on joint team performance). Results show that after successful joint goal progress made together by the team, high relationship power partners persist less on subsequent individual tasks that impact the joint goal than low relationship power partners. However, the same difference in goal persistence between low and high relationship power partners does not emerge in the absence of any goal progress feedback, suggesting that the demonstrated effect is driven by their reactions to successful joint goal progress.

Study 2 obtained responses from both spouses in 79 real married couples. We manipulated goal progress success vs. control (no goal progress feedback) and measured relationship power (Felmlee 1994). Participants (n= 158) imagined that they and their partner have recently set up a joint savings goal and participants assigned to the joint goal success condition were additionally told that they and their spouse have been very successful in their joint savings goal last month. Subsequently, participants had to decide whether to spend or save and indicated their concern regarding the impact of their individual decision on their joint goal. Results showed that after joint goal success, higher relationship power partners exhibited lower saving intentions than their lower relationship power counterparts and lower concern with the impact of their individual decision on the joint goal mediated this effect. There was no difference in savings between lower and higher relationship power individuals in the absence of information about prior joint goal success.

Study 3 was a field experiment aimed at demonstrating the effectiveness of an intervention that increases the consideration of the joint goal among high relationship power consumers and prompts them to engage in goal-consistent behavior following successful goal pursuit. Participants (n = 93 benefit-eligible employees at a large Northeast private university; 33.3% male) were assigned to one of two conditions: intervention vs. control and relationship power was measured. We manipulated goal progress success in both conditions by telling participants that based on a retirement quiz they completed, they and their spouse are well on track to achieve secure retirement. Next, participants were randomly assigned to view one of two versions of a brochure providing information about the university's voluntary 403(b) retirement plan: an *intervention brochure* designed to increase consideration for the impact of one's individual decisions on the joint retirement goal or a *control brochure*. Results revealed that when participants were presented with the control brochure, the more relationship power participants possessed, the less likely they were to take steps towards increasing their retirement savings, replicating results of prior studies. Importantly, when participants were presented with the intervention brochure, the effect of relationship power was no longer significant –high relationship power participants started taking more steps towards increasing retirement savings.

In Study 4 we collaborated with a couples' money management mobile app designed to help couples manage their finances together by enabling sharing of financial information. We sent out a survey to app users (n = 2,363) who were in a committed relationship, which contained the relationship power scale. We also obtained the financial data for the survey respondents and their partners from the couples' money management app. We calculated the difference between the couple's total savings in September 2018 and August 2018 and used this difference as a measure of their savings success and calculated the total amount (in $) spent by each user on transactions in the indulgent "shopping & fun" credit card category during the following one month (i.e., between September 11 and October 10, 2018). Results reveled that when the difference between the September and August joint savings balances was high (successful goal progress), the higher the participants relationship power was, the greater their "shopping & fun" spending was during the subsequent month, suggesting that higher relationship power consumers who experienced joint savings success spent significantly more on shopping and fun the following month than their lower relationship power counterparts

In sum, this research enriches our understanding of sequential decisions in joint goal pursuits and the role of relationship power and suggests that it pays off to have a low power spouse since they appear to be less likely to be liberated by goal progress to make goal-inconsistent subsequent choices.

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Fifty Shades of Gay:
How Gender and Homosexual Imagery Disgusts Politically Conservative Viewers

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EXTENDED ABSTRACT

Purpose

Mainstream media is premised on aggregating large, heterogeneous audiences. Because of this, it is typically designed to appeal to as many as possible, alienate as few as possible and follow a "supposedly nonideological middle ground" (Gross, 2012; p. 7). As a result, most mainstream advertising has typically been targeted at the heterosexual customer (Burnett, 2000), where heterosexual masculinity and the hypersexualized female are considered 'normal' (Rubin, 1984). This has resulted in 'heteronormative ideals' (Warner, 1993) that provide the androcentric lens through which society perceives, interprets and responds to notions of sexuality and gender.

However, advertisers have often included implicit and explicit LGBT themes in order to be more inclusive of LGBT audiences (Ginder & Byun, 2015). While such efforts have mostly been well received by the LGBT community, parts of the heterosexual community have been shown to respond negatively to LGBT imagery in mainstream advertising (Dotson, Hyatt, & Petty Thompson, 2009). This is partly explained by the fact heterosexuals have been found to be much less accepting of homosexuality in general (Kite, 1984), and gay males specifically (Gentry, 1987). Effectively, in terms of heterosexual attitudes to homosexuality, there appears to be a form of 'Homo-Gender Bias' (HGB), where gay males are perceived in a more negative way than gay females. Despite that, there appears to be limited research examining how such HGB influences consumer attitudes or the causal mechanisms that make this occur. One explanation is that an individual's political ideology has the ability to shape consumer attitudes (Kaikati et al., 2017), because it aligns their political and moral identity (Winterich, Zhang, & Mittal, 2012). Based on this, the current paper investigates consumer responses to LGBT-themed advertising and how gender of the models (GoM) influences their attitudes. In addition, it examines how a person's political ideology influences their response to LGBT imagery and identifies a primary emotional response (disgust) as the causal mechanism in the decision process. Specifically, we propose that for politically conservative consumers, the presence of (supposedly) gay male (vs. female) models in an advertisement will have a negative influence on attitudes towards the advertised product. This effect will driven by disgust and attitude toward the ad in a serial mediation.

Design/Methodology

The study employed a 2 (gender: male/female) x 2 (race: same/mixed) x 2 (level of sexuality: implicit/hyper) between-subjects design. While the influence of gender was the focus of the study, race and level of sexuality were included to test the effects of gender in the presence of other factors, thereby adding to the robustness of the findings. For the eight conditions, separate advertisements were created for a fictitious product and brand (luxury watches) by manipulating the images of the models. The tagline 'Love Is Love' was included adjacent to the product and brand name, as it is synonymous with the LGBT movement (Nichols, 2014). Participants (n=546) were recruited from an online panel in the United States. A moderated regression analysis was run using existing scales for attitude toward product (Aggarwal & McGill, 2011), political ideology (Kaikati et al., 2017) and attitude toward the advertisement (Lawrence, Fournier, & Brunel, 2013). Additional variables (respondent gender; sexual preference; age, education, religion, nationality) were recorded as controls.

Findings, originality and contribution

As predicted, a significant effect was observed between gender (of models) and attitude toward the product. Consistent with Hypothesis 1, spotlight analyses revealed conservatives reported more negative attitudes toward the product when the ad included male (vs. female) models (B = .52, SE = .26, t = 1.99, p < .05). By contrast, politically liberal consumers reported similar attitudes toward the product, irrespective of the gender of the models in the advertisement (B = -.40, SE = .25, t = -1.59, p > .10). Similar analyses were conducted to test H2a and H2b. Results provide support for the hypothesis (H2a), such that conservative viewers showed higher levels of disgust when viewing advertisements that included male (vs. female) models (B = -1.28, SE = 0.30, t = -4.26, p < 0.01). Likewise, results provide support for the hypothesis (H2b), whereby conservative viewers reported a more negative attitude towards advertisements featuring male (vs. female) models (B = 1.56, SE = 0.34, t = 4.5, p < 0.01). No significant effects were shown for politically liberal viewers. To test for the mediation effects (H2c), a moderated serial mediation analysis was conducted using PROCESS (model 85) where separate bias-corrected bootstrap models were created, with 5,000 bootstrap samples taken from existing data. Results show a significant indirect effect for politically conservative viewers (B = .21, SE = .065, CI: .0938-.3523). These results provide support for the hypothesis (H2c).

This research set out to investigate how LGBT imagery, GoM and political ideology influence consumer attitudes. According to existing literature, the findings provide what appears to be the first evidence an individual's (conservative) political ideology will have a negative influence on their response to LGBT imagery involving male models. In addition, this study identifies 'disgust' as the causal mechanism that results in negative consumer attitudes towards the advertisement and negative attitudes towards the product, in a serial mediation model moderated by an individual's political ideology. The findings also demonstrate – contrary to existing literature – even implicit LGBT imagery that doesn't include hypersexualized models will generate a level of 'disgust' in conservative viewers. Managerially, this research provides important implications for marketers, more specifically in the context of LGBT-themed print advertising. In particular, while consumers are more than ever familiar with the LGBT movement and its imagery in advertising, marketers must be cautious using such imagery among politically conservative consumers. Overall, this research draws attention to the importance of LGBT themes in advertising and the effects these can have on consumers' product attitudes.

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The Best of Friends, the Worst of Friends:
The Divergent Effects of Seeking the Best on In-Group Identification and Bias

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EXTENDED ABSTRACT

Consumers hold membership in a myriad of social groups (i.e., in-groups) through shared commonalities. Moreover, certain consumers view membership in a given group as especially relevant to their self-definition, and identify strongly as members (Tropp and Wright 2001). Furthermore, their feelings toward the group overall impact evaluations of fellow members; they tend to view members (vs. non-members) in an excessively favorable light, finding members more persuasive, their tastes more enticing, and their products more attractive (Clevstrom et al. 2006; Ferguson et al. 1964; Mc-Garty 1994). This robust phenomenon, known as in-group favoritism, occurs because when consumers who identify with an in-group view a fellow group member, their individual identity is subsumed by a collective sense of self based on their group membership, and they assimilate self-perceptions with those of the member (Turner et al. 1987). This assimilation subsequently prompts them to evaluate the fellow member in a positively biased way, as a favorable assessment also reflects positively on themselves, due to their shared social identity (Tajfel and Turner 1979).

I consider how a goal of maximizing, or attaining the best for oneself, may alter this established link between in-group identification and perceptual favoritism for fellow members. Specifically, I predict and find that because maximizers' attainment of the best is a highly self-relevant pursuit that is often determined by the ability to best others (Schwartz et al. 2002), and similar others are especially important standards of social comparison (Festinger 1954), maximizing fosters a comparative mindset, whereby maximizers are generally motivated to see themselves as better than similar individuals. I further show that this has divergent effects on maximizers' tendency to identify with in-groups as a whole, and their perceptions of individual members. Since in-groups comprise similar individuals with salient commonalities, they provide an essential arena in which the best may be attained, to the extent that maximizers can best in-group members. Their role in maximizers' self-definition bolsters maximizers' identification with in-groups (e.g., Castano et al. 2002). Yet, because such feelings stem from maximizers' motivation to best similar individuals, when viewing a similar in-group member, rather than assimilating self-perceptions, maximizers see the member as a comparison target to be bested, and contrast self-perceptions with the member (Brewer and Weber 1994). Moreover, insofar as maximizers seek to best similar others, they evaluate fellow members (vs. non-members) in a less positive or even negatively biased way, as this ensures favorable comparisons with similar individuals. Finally, I show that when maximizers evaluate in-groups at the aggregate rather than the individual level, thereby inhibiting their tendency to engage in individual comparisons with in-group members, they actually exhibit greater in-group favoritism than their non-maximizing counterparts, consistent with their enhanced in-group identification.

A **pilot study** measuring chronic maximizing tendencies first showed that maximizing was positively associated with a general motivation to see oneself as better than fellow in-group members (β=.39, t=3.27, p<.01).

In **study 1a**, participants were randomly categorized as overestimators or underestimators following a perceptual task. They then indicated their motivation to best fellow in-group members (i.e., other over or underestimators; 7-pt scales), and their level of identification with the in-group overall. Finally, they reported chronic maximizing tendencies. Maximizing was positively associated with in-group identification (β=.21, t=1.98, p<.05), mediated by maximizers' heightened desire to be better than in-group members (indirect effect=.131, 95% CI=.0209 to .3286).

In **study 1b**, participants were again randomly categorized as overestimators or underestimators. They then viewed the profile of a supposedly real fellow student with their same categorization (i.e., in-group member), who was depicted as either successful or unsuccessful, and reported self-perceptions of success relative to other college students (*bottom 5%/upper 5%*, 10-pt scales). Finally, they reported chronic maximizing tendencies. For low maximizers (-1SD), self-perceptions of success were positively impacted after viewing a successful (vs. unsuccessful) in-group member ($M_{successful}$=7.09 vs. $M_{unsuccessful}$=5.96; p<.01). However, for high maximizers (+1SD), self-perceptions were negatively affected after seeing a successful (vs. unsuccessful) member ($M_{successful}$=6.77 vs. $M_{unsuccessful}$=7.47; p=.06), suggesting that high maximizers contrasted their own success with that of the in-group member, despite their heightened identification with the in-group as a whole in study 1a.

In **study 2**, after reporting chronic maximizing, participants saw photos of students purportedly from their same (in-group members) or a different school (out-group members), rated each student's socialness relative to other college students (*bottom 5%/upper 5%*, 10-pt scales), and indicated their level of identification with their school (i.e., in-group) overall. Low maximizers' (-1SD), ratings of students' socialness were not affected by their status as in- (vs. out-) group members (M_{in}=5.58 vs. M_{out}=5.33; p=NS). However, for high maximizers (+1SD), students' designation as in- (vs. out-) group members significantly impacted their socialness ratings, such that high maximizers rated in-group members relatively *lower* in socialness than out-group members (M_{in}=5.42 vs. M_{out}=5.95; p < .05). Moreover, this negative in-group bias emerged despite high maximizers' heightened identification with their school (i.e., in-group) overall (β=.28, t=4.46, p<.001).

In **study 3**, participants viewed the resumé of a student purportedly from their same (i.e., in-group member) or a different school (i.e., out-group member), and rated the student's desirability as a job applicant (9-pt scales). They then reported their general motivation to best other students at their school, and their level of identification with their school (i.e., in-group) overall, followed by chronic maximizing tendencies.

For low maximizers (-1SD), ratings of students' desirability was positively impacted by their designation as in- (vs. out-) group members (M_{in}=7.26 vs. M_{out}=6.34; p<.05). Conversely, at high maximizing (+1SD), this positive bias was attenuated (M_{in}=6.75 vs. M_{out}=7.06; p=NS). Yet, maximizers also exhibited heightened identification with their school (i.e., in-group) overall (β=.38, t=3.93, p<.001). Maximizers' enhanced motivation to best fellow students mediated ratings (indirect effect in in-group member condition=.198, 95% CI=.0540 to .5069; indirect effect in out-group member condition=NS) and in-group identification (indirect effect=.223, 95% CI=.0923 to .4149).

Finally, in **study 4**, when participants assessed paintings that were purportedly favorites of individual in-group members, maximizing was negatively associated with painting ratings (B=-.46, t=-2.19, p<.05), but when they assessed paintings that were purportedly the favorites of the in-group overall, maximizing was positively associated with painting ratings (B=.42, t=1.98, p<.05).

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Understanding Marketplace Tranquility

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EXTENDED ABSTRACT

Recently, the marketplace has seen a rapid increase in consumer demand for products, services, and experiences that facilitate their ability to cope with hectic lifestyles. These marketplace solutions range from traditional choices (e.g., yoga), to newer offerings such as adult coloring books, Bose noise-reducing headphones, and Amtrak "Quiet Cars." One outcome consumers seek to gain from these offerings is experiencing the low-arousal positive (LAP) emotion of tranquility, or feelings of calm, peacefulness, serenity that help them cope with myriad physical, social, and emotional stressors.

Despite the increase in consumer demand, little understanding exists regarding how marketers deliver products, services, and experiences that can foster tranquility. Consistent with both the research on "consumption emotions" (e.g., Richins 1997) rooted in consumer psychology, and the still-dominant strategic paradigm of the "experience economy" (Pine II and Gilmore 1999), research on emotions and the consumer experience either emphasizes understanding consumers' responses to high-arousal, sensory-laden marketplace experiences, or offers advice on how to deliver these experiences.

Research in psychology conceptualizes tranquility as a mental state characterized by emotional ease and lack of anxiety (Ellison, Burdette, and Hill 2009; Yager 1982). People experience tranquility when they are at peace with their current state and perceive few demands on their time and resources (Berenbaum et al. 2016). Tranquility is also characterized by pleasant inactivity in the body and mind (Cordaro et al. 2016; Ellsworth and Smith 1988). Only recently, researchers have begun to tease out how low-arousal positive emotions (LAPs) may relate to–or even represent–dimensions of more basic emotions (e.g., happiness; Mogilner, Aaker and Kamvar 2012). In summary, an opportunity exists to better understand how consumers experience, and marketers strive to offer the experiences of LAPs, and the benefits (and drawbacks) of doing so for each.

We address this theoretical and empirical gap by exploring an emergent construct we label "marketplace tranquility" (MT). In doing so, we initially explored a broad research question: how do businesses seek to offer tranquility-related marketplace offerings? We then honed our questions to investigate: 1) What types of tranquil offerings exist? 2) What salient sources of tranquility emerge within these offerings? 3) What are marketers' goals regarding tranquil offerings? 4) What outcomes do marketers reap when offering marketplace tranquility? Through close examination of these business practices and offerings, we offer a new framework that explores overlooked "tranquil" marketplace offerings, and how these are meeting consumers' increasing demands and expectations for the experience.

METHOD

Given our goal to explicate a new construct (MacInnis and De Mello 2005), we adopted a two-phase research approach. Phase One focused on generating a broad understanding of what offering marketplace tranquility entails for practitioners. Phase Two delved into the specific aspects of marketplace tranquility that emerged as salient in Phase One, and also served as a reliability check against earlier findings. Phase One involved depth interviews with 19 practitioners conducted in 2017, and Phase Two included interviews with 8 more practitioners during 2019. The 27 informants discussed 28 different "tranquil" businesses (one informant had two businesses. All interviews were phenomenological in approach, first asking people about their business history and goals. Interviews then transitioned into a more semi-structured approach, probing how these practitioners understand tranquility in the marketplace and what/how aspects of their business help them deliver tranquil-oriented outcomes, followed by questions about the benefits and unintended consequences of offering tranquility, and the boundary conditions they perceive exist when attempting to deliver this outcome.

FINDINGS

Our interviews reveal five key findings pertaining to how our informants strive to offer tranquility-related outcomes.

Types of Tranquility Offerings: Intentional vs. Unintentional. We find our practitioners' offerings can be classified as both intentionally and unintentionally contributing to consumer tranquility. For some businesses, their main goal is to deliver tranquility (e.g., yoga, Japanese cultural center), whereas other businesses offer tranquility along with many other goals (e.g., museum, coffee shop). In those cases, tranquil offerings may even be unintentionally delivered.

Sources of Tranquility: Core vs. Peripheral Offerings. Source of tranquility can be part of core offerings (e.g., yoga) or peripheral to the core product/service/experience (e.g., aesthetics, rituals). Businesses follow or employ different marketing strategies to induce tranquility, depending on these offerings. These strategies can also depend on whether tranquil offerings are intentional or not. For example, in a yoga class, consumer tranquility can emerge as an outcome from the yoga itself (a core offering), but it can also come from the ambience in the space (peripheral offering).

Objective of Tranquil Offerings: Disconnecting vs. Connecting Consumers from Their Daily Lives. Businesses can strategically try to deliver tranquility to disconnect consumers from everyday chaotic life (e.g., providing a separate quiet space or an extraordinary experience). Paradoxically, however, these offerings can also help reconnect consumers with elements of lives they may need to improve or refresh (e.g., retaining good memories of tranquil experiences, transferring a philosophy of living they learn by participating in a tea ceremony).

Business Outcomes of Marketplace Tranquility. Practitioners report they can reap several benefits when they deliver tranquility-related offerings. These include increasing revenues and enhancing brand evaluation and recognition. Marketplace tranquility also can exert an importance influence on customer well-being (e.g., providing comfort and a low barrier of entry to a company), as well as to employee well-being.

Unintended Consequences of Marketplace Tranquility. Businesses may experience some conflicts when offering tranquility if other goals compete with that outcome. This occurs especially when tranquility is offered unintentionally and not a main goal of the business (e.g., restaurants).

DISCUSSION

The present work advances current understanding of marketplace tranquility, and how businesses offer tranquility to consumers. Specifically, we discover different types of tranquil offerings, and plumb how these tranquil offerings may derive from different sources. Also, we find firms seek to deliver tranquility that can help consumers both disconnect and connect from their daily lives, which has significant implications on consumers' well-being as well as business outcomes.

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Visual Ambiguity in Product Design Predicts Crowdfunding Success

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EXTENDED ABSTRACT

"To design something really new and innovative, you have to reject reason." —Jony Ive, Chief Design Officer, Apple

Prototype development and rendering is a critical stage for firms looking to acquire financing and support for new products. Rooted in the principles of design thinking (Brown 2009), prototypes help ideas develop faster by making them more tangible, working as a catalyst to elicit feedback from others. In a sense, the way a prototype looks serves as an important strategic consideration in a new venture's prospectus. Here, marketers and engineers often face tradeoffs when designing the visual appearance of a new product. Designers tend to want their products to look new and cutting edge, but at the same time they are well aware of the relationship between form and function, whereby visual design serves to communicate the product's range of functionality. This creates the potential for ambiguity.

While ambiguity in everyday experiences may not be desirable, when it comes to aesthetic experiences, like modern art, ambiguity may be the single most defining feature. Architects, chefs, photographers, and even coordinators of modern dance, all employ visual ambiguity as a tool to elicit interest and involvement. If used correctly, it can encourage co-creation, wherein the audience or consumer brings their own perspective to the event. This can augment preference and coerce repeat patronage. Yet despite the aesthetic commonalities, product designers are often discouraged from using visual ambiguity because unlike art, uncertainty may serve little value when one is looking for a hammer.

The above line of reasoning follows a wealth of research in marketing that cautions the use of visual ambiguity when rendering initial prototypes in new product design. A new product that deviates dramatically in design from an existing prototype or schema can lead to a negative emotional state as consumers struggle to make sense of the product without abandoning or reconfiguring their existing beliefs (Meyers-Levy and Tybout 1989; Noseworthy and Trudel 2011; Stayman, Alden, and Smith 1992). This is the potential consequence of what can be referred to as *prototype ambiguity*. Alternately, new products that incorporate distinct design elements from two or more categories can lead to biased estimates of the product's functional utility, whereby certain features may go ignored or undervalued (Gregan-Paxton, Hoeffler, and Zhao 2005; Moreau, Markman, and Lehmann 2001; Noseworthy and Goode 2011; Rajagopal and Burnkrant 2009). This is the potential consequence of what can be referred to as *category ambiguity*. Both forms of visual ambiguity present unique challenges, and both have potential to strategically communicate unique benefits. For instance, prototype ambiguity is often used in practice to signal novelty or hedonic expression, whereas category ambiguity is often employed pragmatically to express expanded functionality or utilitarian value. Nevertheless, given the valid concerns, marketing scholars predominantly endorse the stance that any form of visual ambiguity is fraught with risk.

Despite the wealth of evidence to caution the use of visual ambiguity in new product design, there is a growing body of work in the field of category learning that calls into question the veracity of some of the risks (Griffiths et al. 2012). It seems that people are quite adept at handling ambiguity when (i) they are aware of the costs of ignoring the properties from all categories, when (ii) they are not explicitly asked to categorize the object (Hayes and Newell 2009), and when (iii) there are no explicit contextual cues to infer the designer's intent (i.e., a specific store aisle; Noseworthy et al. 2012). What is interesting about these caveats in the context of a new product venture is that they correspond with a unique stage in product development: initial prototype rendering for venture funding.

In a new venture funding context, potential investors must do their due-diligence to incorporate all pertinent information. These investors are not forced to make explicit category judgments, and they see products independently of marketing material or normative positioning. Thus, it stands to reason that the negative aspect of visual ambiguity may not be as prevalent in arguably one of the most important stages in the new product development process. The challenge is that this stage has been historically difficult to study primary because few are privy to the exclusive and often secretive discussions that precede the introduction of most of today's innovations. However, there is one critical exception—new venture crowdfunding platforms. Crowdfunding allows new ventures to request funding from many individuals simultaneously, generally in exchange for future products or for stake in equity. Researchers have demonstrated that crowdfunding can play an important role in venture capital, particularly in sectors where crowds are the end users, testing the accessibility of a product's positioning to potential consumers (Mollick 2014; Mollick and Nanda 2015). The issue with this, however, is that datasets are typically large and unstructured, which presents a challenge for assessing visual ambiguity for thousands of prospective ventures. Fortunately, recent advances in automated image classification mitigate many of these concerns.

VISUAL AMBIGUITY

The key distinction between the two forms of ambiguity is in the benefits that they communicate. Prototype ambiguity often, though not exclusively, is employed as an architectural adjustment to an existing prototype for hedonic expression (e.g., Black Toilet Paper). Category ambiguity is primarily the result of augmenting the utilitarian or functional expression of an exemplar within a category (e.g., the Apple Watch). Although not mutually exclusive, there is an interesting interplay when considering the unique challenges. It may be that product designers who are developing new products that span functional boundaries should strive for both types of ambiguity during prototype rendering.

First, consider a product with category ambiguity (i.e., it has multiple category traces). Whereas having multiple category traces can stimulate interest and consumer involvement, it can result in an overconfident classification of the object to a single category that biases benefit acquisition (the single category belief problem). However, consider that this product has not only category ambiguity, but also prototype ambiguity. As prototype ambiguity reflects a lower consumer confidence in what the object is, the systematic underweighting of other category cues is less likely because the consumer is less confident in what the product is.

Second, consider a product with prototype ambiguity such that the consumer does not see the product as fitting their expectation of a product in the category. Whereas not fitting well into an existing

product category can stimulate interest and consumer involvement, it can also result in the problem of tension as the consumer struggles to make sense of "why the product looks this way." However, consider that the product also has category ambiguity such that it is associated with multiple category traces. Products with category ambiguity show the capacity for the product to transcend the functional domain of any one particular category, and may thus provide a way to highlight what truly makes the product unique. That is, the product looks this way because it has a unique set of functional features that come from spanning multiple categories.

As such, we argue that new innovative products that expand functional boundaries can strategically be designed to visually deviate from existing product schemas to the extent that they incorporate both forms of visual ambiguity. Doing so would, in turn, elevate support relative to a product that is visually unambiguous, presuming that the product is indeed innovative:

Hypothesis 1   *Products displaying visual ambiguity through both category and prototype ambiguity are associated with better crowdfunding outcomes than visually unambiguous products.*

Our theorizing also leads us to specific predictions regarding the conditional effects of both category ambiguity and prototype ambiguity. First, when there is prototype ambiguity (i.e., consumers are not certain about the product is), the overconfidence sometimes associated category ambiguity is no longer expected to manifest itself. As a consequence, we expect that among products with prototype ambiguity, those with category ambiguity will be associated with better crowdfunding outcomes. Second, when there is category ambiguity (i.e., consumers associate the product with more than one category), the potential tension sometimes associated with prototype ambiguity can be resolved. As a consequence, we expect that among products with category ambiguity, those with prototype ambiguity will be associated with better crowdfunding outcomes.

Hypothesis 2a   *When a boundary spanning product's image reflects prototype ambiguity, an increase in category ambiguity is associated with better crowdfunding outcomes.*

Hypothesis 2b   *When a boundary spanning product's image reflects category ambiguity, an increase in prototype ambiguity is associated with better crowdfunding outcomes.*

METHOD

We examine how visual ambiguity in the design of new technology ventures is associated with crowdfunding success. More specifically, we first use the output of a publicly available automated image classification procedure (via the Google Vision API) to approximate human judgments of categorical and prototypical ambiguity. Second, we augment two datasets of crowdfunding project characteristics and outcomes[1] with our measures of visual ambiguity. Across both

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1   In our studies, we operationalize success as people's willingness to pledge money, the company's likelihood of meeting its funding goal, and the number of backers the project receives. The number of backers is critical as it demonstrates a uniform increase in demand across the platform instead of institutional support.

datasets, we show that visual ambiguity via *both* categorical ambiguity and prototypical ambiguity is associated with greater odds of new venture funding success – even while accounting for numerous important project characteristics such as the textual information provided with the product images.

Pilot Study – Validating a Visual Algorithm as a Proxy for Human Perception

Visual algorithms are designed to mimic the architecture of the human brain, and thus "acquaint themselves with the world via trial and error, as toddlers do, [helping] to develop something like human flexibility" (Lewis-Kraus 2016). This flexibility is critical because it allows people (and algorithms) to handle ambiguity. Recent advancements now permit the processing of thousands of images in a matter of minutes, interpreting and classifying images as containing *concepts* and giving estimates of *confidence* in which the concepts are present in the image.

In this pilot study, we investigate whether a computer vision algorithm can be used to mirror consumer perceptions of both category ambiguity and prototype ambiguity. To do so, we randomly selected a subsample of 104 images from the Kickstarter dataset to assess human judgments of visual ambiguity for each of category ambiguity and prototype ambiguity. We used Google's Cloud Vision API to interpret digital images of new products. This software uses machine learning to annotate an image with labels, each of which is confidence-scored, in just over one second. For example, an image of a workstation might return labels such as monitor, computer tower, keyboard, and mouse. This annotation process enables the ability to extract two variables for any future analysis: (1) category ambiguity, represented by the number of labels annotated to an image (either 0, 1, 2, 3, 4, or 5); and (2) prototype confidence (the absence of prototype ambiguity), represented by how certain the algorithm was with associating the image with its primary label.

To collect human ratings of category and prototype ambiguity, we created a modified image-tagging task on Amazon's MTurk. 3,640 participants were shown a single image and asked two questions: (1) "*What do you think this is?*" as an open-ended text box; and (2) "*How certain are you?*" (anchored 1 = extremely uncertain; 6 = extremely certain). The first question allowed us to assess category ambiguity and the latter allowed us assess prototype ambiguity. Each of the 104 product images was rated by 35 unique judges, and each participant evaluated only one image. As expected, we found a positive association between the number of labels identified by the algorithm and human judgments of category ambiguity ($B = .10$; $t(101) = 4.17$, $p < .001$), but no association between the algorithm's primary classification confidence and human judgments of category ambiguity ($B = -.19$; $t(101) = -1.03$, $p = .31$). Similarly, we found a positive association between human confidence and the algorithm's primary classification confidence ($B = 5.01$; $t(101) = 9.86$, $p < .001$), but no association between the number of labels assigned by the algorithm and human confidence ($B = .07$; $t(101) = 1.11$, $p = .27$). Our next step was to take these proxies into the field and apply them to real-world data.

Illustration 1 – Kickstarter

Our first study examined a dataset of 19,755 Kickstarter technology projects. Each project entry provided a project ID, funding goal, amount pledged, number of backers, whether it was featured as a staff pick, the project launch date, and deadline. It also provided the project's title, a short text description of the project, and a link to the project image. Each image was run through the Google Cloud Vision API, which uses machine learning to classify digital images. This annotation process enabled us to create two distinct variables

for our analysis: (1) categorical ambiguity, represented by the number of labels annotated to an image (between 0 and 5); and (2) prototype confidence, represented by how certain the algorithm was with associating the image with its primary label (between 50-100%). Consistent with our expectations, we found a significant interaction between category ambiguity and prototype confidence as they relate to each of our indicators of crowdfunding success. For projects with low prototype confidence, increased category ambiguity was associated with greater odds of success.

Illustration 2 – Indiegogo

Replicating these findings on a more dynamic, flexible, and potentially higher risk platform where we could also control for strategic alliances was the motivation for Study 2. We examined 34,448 technology projects on Indiegogo. Their funding goals tend to be smaller and success rates are lower than Kickstarter (18% vs. 36%) (Barnett, 2013). In addition, Indiegogo does not require a working prototype to launch a project campaign. They also offers partnership opportunities that can be embedded into the project posts to signal viability to potential backers.

The same general pattern of findings emerged relative to Study 1. We replicated our hypothesized effects across all dependent variables of interest, demonstrating that categorically ambiguous projects that lacked prototype confidence were the most supported on the platform.

General discussion

By adapting an engineering perspective of machine learning to venture funding, we find that a visual algorithm can potentially optimize the communication of new prototypes. To our knowledge, we are the first to apply a computer vision algorithm to a market-oriented outcome, specifically the willingness to support a new product. In doing so, we address a major gap in machine learning research by advancing machine learning from a generative platform, which facilitates prototype development, to an intuitive platform – one that implicitly understands consumers and ultimately predicts how the market will respond to product design innovations. From a praxis perspective, this work offers a new tactical tool that entrepreneurs and investors can use to assess market sentiment towards a new product venture. Traditionally, prototype testing could take months and costs thousands for a single product design. Computer vision presents a unique proxy for market research that can forecast responses for thousands of different product design iterations in a process that takes minutes for a nominal cost.

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Threshold Escalation in Product Lineups

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EXTENDED ABSTRACT

Consumers often search for a product that matches a previously encountered option, without knowing its exact name. Whether we watch an advertisement but fail to register the product's name, see admired others using a product but are reluctant or unable to ask for details, or briefly experience a high quality product, we often later find ourselves looking, either online or in the store, for the specific product we encountered before. In the process, we typically browse through a sequence of similar products, guided only by a fuzzy recollection of what we saw earlier – an experience to which we refer as a product lineup. Although more than 90% of the 491 participants we surveyed said that they had had similar experiences, little prior research has investigated them directly.

We examine how consumers' ability to accurately identify the target in a product lineup is influenced by the inner dynamics of the search process itself. Specifically, we propose that as consumers screen through more and more options that look similar, but are not identical to the target product (henceforth, lures), they become more and more likely to falsely dismiss the true target as incorrect when they finally encounter it. We argue this happens because each time consumers evaluate a lure and judge it to be incorrect, they draw an implicit inference that the true target must feel *even more* familiar or "right" (Cesario, Grant, and Higgins 2004) than the screened option. That is, each time consumers dismiss an option that does not feel sufficiently "right" or similar to the representation they hold in memory, their inner threshold for how right the correct target should feel (Green and Swets 1966; Nosofsky and Zaki 2003) is ratchetted-up by way of contrast with the previous judgment (e.g., Parker et al. 2008). Finally, because repetition tends to inflate perceptions and evaluations (Judd and Brauer 1995 for a review), wading through a longer sequence of lures results in a more pronounced threshold escalation, compared with a shorter sequence.

Taken together, we propose that as consumers evaluate more and more lures in their quest to identify a target product in a lineup, their matching threshold escalates, making them more likely to misidentify the correct target when it finally appears. Thus, consumers become more conservative but – ironically – less accurate in their judgments.

Study 1a utilized an incentive-compatible paradigm, where participants saw an attractive product they could receive and later tried to identify it in a sequence of similar-looking but inferior lures. Each time participants saw an option in the sequence, they indicated whether that was the correct product they had seen before. The correct target appeared after two or six lures. As expected, participants who dismissed more lures (six vs. two) were more likely to erroneously misidentify the correct target as incorrect when it finally reappeared (6-lures=45.3% vs. 2-lures=24.2%; $\chi^2(1)$=8.78, p=.003). Consistent with a threshold escalation mechanism (and inconsistent with an alternative fatigue or memory decay account), participants were also more likely to correctly identify the last lure in the sequence in the 6-lure condition (84.8%) than in the 2-lure condition (65.4%; $\chi^2(1)$=4.833, p=.028). We replicated this effect in study 1b while also casting doubt on a Bayesian updating alternative account, by telling participants in both conditions that the likelihood of encountering the correct target on any given trial is 1/15 (6-lures=38.8% vs. 2-lures=17.9%, $\chi^2(1)$=8.39, p=.004).

Studies 2 and 3 replicated the effect in additional product categories, using a more controlled, simulated paradigm to address endogeneity concerns and to test the underlying mechanism. After allowing participants to evaluate each lure for a while, we explicitly told them that it was not the right target. Our theory predicts that telling participants the lures were not the target should not change their inference that the true target should feel more familiar in comparison.

If people ratchet-up their inner threshold after dismissing lures, then our effect should attenuate when people believe their inner threshold is already high enough. Study 2 used a 2×2 design: in addition to manipulating the number of pre-target lures (5 vs. 9), we gave half the participants social-comparative information which made them perceive that they were already employing a high threshold (vs. no change in the control condition). We predicted this would attenuate their tendency to increase their threshold after seeing more lures. Results replicated the previous findings in the control condition (9-lures=38.6% vs. 5-lures=23.5%; $\chi^2(1)$=4.36, p=.037), but not when participants believed their threshold was already high to begin with (21.6% vs. 26.8%; $\chi^2(1)$=.57, p=.45).

If threshold escalation is driving our effect, then encouraging participants to adopt a high threshold, regardless of the number of pre-target lures, should increase erroneous dismissal of the target even when they did not screen through many lures. Study 3 used a 2×2 design: in addition to varying the number of lures, we told half the participants that the lures were very similar to the correct target (vs. somewhat similar, in the control condition), thereby leading them to adopt a more stringent criterion. Supporting the threshold escalation mechanism, the effect replicated in the control condition (6-lures=44.1% vs. 2-lures=21.3%; $\chi^2(1)$=7.080, p=.008) but not when participants were led to adopt a stringent threshold at baseline (40.0% vs. 37.9%; $\chi^2(1)$=.053, p=.818).

Study 4 examines a boundary condition, showing that the threshold escalation effect is attenuated when recognition decisions do not depend on perceived "rightness" or similarity. Specifically, when a distinctive feature was added to the target product, wading through more lures did not increase the likelihood of misidentifying it (distinctive feature absent: 6-lures=41.5% vs. 2-lures=16.2%; $\chi^2(1)$=14.83, p<.001; feature present: 21.6% vs. 17.1%, $\chi^2(1)$=.58, p=.45).

This research makes several contributions. In addition to introducing the notion of product lineups and examining a novel process that impacts identification accuracy, it contributes to product search and recognition literature by revealing an additional mechanism that may bias consumers' search accuracy. The findings have practical implications in a range of domains, from consumer welfare to search-engine design.

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Man Versus AI: Resisting Technology in Symbolic Consumption

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EXTENDED ABSTRACT

Using a new product necessarily entails risk, which can cause resistance to adoption. A marketing recommendation system may decrease the psychological risk associated with purchases by guiding the decision-making process to be more efficient for the consumer. Artificial agents (AAs) have been becoming smarter and, currently, are widely applied to various recommendation systems. However, do people always love to adopt the smart AA recommendations? The obvious answer is that they do not. In this research, we seek to answer the fundamental question of why people are reluctant to accept artificial intelligence (AI) recommendations.

The hallmark of humanity is the mind. Spanning a period from ancient history to early modern history, Aristotle (350 BC) and Descartes (1641) believed that only humans can have minds, and this belief has long been staunchly protected (Searle 1983). However, this firm belief is now being threatened. Modern technology has developed to allow for the creation of more and more humanlike entities (Breazeal and Scassellati 2002; Brooks 2002). Robots that are perhaps too humanlike are becoming more common, and some people feel discomfort about them. This feeling of discomfort may result not only from the humanlike appearance but also from the belief that only a human can possess a mind. As Gray and Wegner (2012) proved, this unnerving feeling by applying the concept of the "uncanny valley."

Most of the previous literature only focused on unnerving feelings in terms of the humanlike appearance of robots, until Gray and Wegner (2012) suggested that the uncanny feeling actually arises because the humanlike robot prompts the attribution of a mind. When a robot is perceived to have its own mind, people feel unnerved. Similarly, a human may be seen as strange (and may even be called "robotic) when the mind—or rational self—is removed from emotion. Gray and Wegner (2012) concluded that what makes us human is having a mind, and this is what distinguishes us from non-human entities.

The essentiality of the human mind exists in the search for symbolic meaning, which is considered fundamental to human existence. It is essential that we persistently fill up this emptiness with search for meaning, which finally constitute a symbolic self (Watsuji in Odin 1996; Satre 1998). Thus, the pursuit of symbolic meaning is vital to the essence of creation, persistence and communication between the self and the world (Wattanasuwan 2005). Because of the close relationship between searching for meaning and symbolic consumption, consumers regard products having symbolic meaning as a part of themselves; symbolically, the self extends into possessions (Csikszentmihalyi and Rochberg-Halton 1981). Thus, by consuming symbolic brands, people fulfill their own symbolic meaning in different ways (Elliott and Wattanasuwan 1998). On the other hand, Functional or utilitarian consumption (Bhat and Reddy 1998) satisfies consumers derive from "the functions performed by the products" (Voss, Spangenberg, and Grohmann 2003, p. 310). For functional consumption, the search for symbolic meaning is not a critical factor in purchase decision-making process (Park, Jaworski, and MacInnis 1986). Thus, we proposed that if a non-human entity crosses the line by mimicking a human mind, people might feel discomfort as a result. Especially in the area of symbolic consumption whose attached meaning is considered essential, we predict that, people are reluctant to accept the recommendation from AA. However, for functional brands, there is no reason to hesitate to accept recommendations from smart AA. Based on the literature review, we developed the following research model is developed.

Because of word limit, we only report Study 5 (among the eight lab studies and one field study) in this extended abstract. For Study 5, one hundred and ninety U.S. participants (106 female, M_{age} = 27.04, SD = 4.93) were recruited via Prolific Academic and randomly given to one of four conditions in a 2 (recommendation agent: AA vs. Human) × 2 (consumption goal: symbolic vs. functional) between participants design. First, participants read a consumption goal scenario, either symbolic or functional. After that, participants were randomly assigned to one of the two recommendation scenarios varying agent types either from an AA or human employee. Then, participants reported their product likeness toward the recommended automobile and also provided demographic information. To demonstrate serial mediation effect, we additionally measured undermining human capacity (adapted from Ferrari et al. 2016) and discomfort feeling (adapted from Gray et al. 2012) in 7-point scale.

A 2 (recommendation agent) × 2 (consumption goal) ANOVA on product likeness (α = .89) indicated a significant two-way interaction ($F(1, 186)$ = 5.74, p = .018; p = .461 for main effects of recommendation agent and p = .382 for consumption goal). As we predicted only in the symbolic consumption situation by highlighting the meaning attached to the product, participants showed higher preference toward the automobile recommended by a human agent compared to AA (M_{human} = 5.48, SD = 1.05; M_{AA} = 4.98, SD = 1.09; $t(186)$ = 2.21, p = .029). However, there was no significant preference difference between human and AA for the functional consumption goal (M_{human} = 5.24, SD = 1.18; M_{AA} = 5.50, SD = 1.07; $t(186)$ = 1.18, p = .240).

In order to examine whether undermining distinctive human capacity and perceived discomfort serially mediate the interaction effect of recommendation agent type and consumption goal on product likeness, a serial mediation analysis was performed using the PROCESS 3.0 macro (model 85) with 5,000 resamples (Hayes 2017). The model uses type of recommendation agent as the independent variable, consumption goal as the moderator, undermining human distinctive capacity and perceived discomfort as anticipated mediators, and product likeness as the dependent variable. The findings suggested an interaction effect of recommendation agent and consumption goal on product likeness was mediated serially via undermining human distinctive capacity and perceived discomfort (95% CI = [−.15, −.01]). Further, the conditional indirect outcome of consumption goal on product likeness was only significant for the symbolic (95% CI = [−.17, −.01]), but not for the functional (95% CI = [−.06, .02]).

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Doing Good in the Luxury Store:
Prestigious Store Atmosphere Increases the Purchase of Ethical Products

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EXTENDED ABSTRACT

Consumers' growing awareness in matters such as climate change, child labor, unfair wages and animal testing has led to a growing interest in pro-environmental and pro-social products. In this research we refer to such products as ethical products or those products with Fair trade, Organic or BIO labels (Lades 2014, Mazar and Zhong 2010, Starr 2009). We explore ethical purchases in a domain over which marketers have significant control: retail atmospherics. Consistent with past research, we dissociate between prestigious and non-prestigious store atmosphere. Prestigious retail store atmosphere is operationalized as a set of situational cues that elicit a store image of luxury, prestige and upscaleness, whereas nonprestigious retail atmospherics do not evoke this image (Baker et al. 2002). Findings in the retail atmosphere literature suggest that the aggregated set of retail atmospherics affect consumers purchases (Baker et al. 2002). We extend these findings to a specific product type: ethical products. We contribute to research suggesting how retailers can promote ethical products.

The combination of positive and negative attributes in ethical products makes them an ambiguous product category to purchase. Consumers associate ethical products with a set of positive attributes, such as a positive self-signal (White, Macdonnel, and Dahl 2011) or fitting with the higher order goal to do good (Peloza, White, and Shang 2013; Steenhaut and Van Kenhove 2005). Yet, at the same time, consumers associate ethical products with a whole set of negative attributes such as high price, quality concerns or low availability (Luchs et al. 2010). Given asymmetries of ambivalence (Cacioppo, Gardner, and Berntson 1997), one would expect that the ambiguity of an ethical product can hardly lead to favorable preferences and would frequently hurt ethical purchases.

We build upon research suggesting that situational cues can help people resolve ambivalence (Nordgren, Van Harreveld, and Van Der Pligt 2006) to explore one condition under which this ambiguity can be an asset for the ethical product. We argue that the ambiguity of ethical products makes the preferences for the ethical product more malleable. This malleability due to ethical products' ambiguity can facilitate rather than inhibit ethical consumption if the situation is such that it positively influences ethical product perception. We propose that this makes it possible for prestigious stores to positively influence preferences for the ethical product. Given that consumers perceive an upscale store to be more positive than its non-prestigious counterpart, we propose that this helps consumers to reconcile ethical products' ambiguity. Specifically, we propose that ethical products are positively reevaluated in the prestigious store and are perceived as superior in comparison with their standard counterpart, which increases the willingness to buy ethically in a prestigious store.

Study 1's goal was to test the first hypothesis that prestigious store atmosphere increases willingness to buy ethically. Following a randomized between-subjects design (prestigious vs. nonprestigious store atmosphere), participants (N=156, mturk) read the pretested scenarios and were asked to imagine a consumer in this store. We conducted the studies in the third person to reduce social desirability effects on responses, a common concern in ethical consumption (Luchs et al. 2010). All participants rated how willing the consumer was to buy ethically for two product categories: toothpaste and laundry detergent. In all studies, the standard product was placed on the left and the ethical product was placed on the right side of a 7-point scale. Thus, a higher score represents higher willingness to buy ethically. Analysis yielded a significant main effect of store atmosphere on willingness to buy ethically ($F(1, 103) = 9.39$, $p = .003$), where participants in the prestigious store ($M = 4.88$, $SD = .23$) were more willing to buy ethically than those in the nonprestigious store ($M = 3.88$, $SD = .23$).

Study 2's goals were to replicate H1 with a different manipulation and test H2. We conducted a between-subjects design with three conditions: Prestigious, nonprestigious and a standard store condition. Participants (N=307, mturk) imagined a consumer in the store depicted and rated their willingness to buy one of the two product alternatives for toothpaste and laundry detergent. Then, participants rated how superior the ethical product was in comparison to the standard product on a 7 point-Likert scale. An ANOVA with store atmosphere as independent variable yielded the predicted main-effect of store atmosphere ($F(2, 302) = 3.37$, $p = .03$). We conducted a mediation analysis to test H2. We found support for perceived superiority ($a = .40$, $p = .04$) mediating the effect of store atmosphere on willingness to buy ethically ($b = .36$, $p < .0001$; $c = .15$; CI=.0145 to .2927.

Study 3's goal was to test the ambiguity reconciliation psychological process via moderation (Spencer, Zanna, and Fong 2005). A major source of negativity in ethical products seems to stem from the credibility of its ethicality (Schroder and McEachern 2004). We manipulated consumers' certainty about the ethical product by stating that the store verified the truthfulness of the ethical label using a third party. We expected to replicate our findings in the control condition (ambiguous), but not in the verified condition, where ambiguity of the ethical product was reduced. We conducted a 3 (store: prestigious vs. standard vs. nonprestigious) x 2 (label: control vs. verified). Participants (N=237, college students) followed the scenario used in study 2. An ANOVA yielded a main effect of store ($F(2, 231) = 4.73$, $p = .01$) and an interaction ($F(2, 231) = 3.61$, $p = .031$). The effect of store atmosphere was significant in the control condition ($F(2, 115) = 8.60$, $p < .001$). As expected, the effect of store atmosphere was nonsignificant in the verified label condition ($p > .96$).

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The Effect of Package Color on Food Decision Making and Its Implications for Consumer Well-being

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EXTENDED ABSTRACT

Food choice behavior is susceptible to contextual effects, as evidenced by past research examining various factors such as assortment variety (Kahn and Wansink 2004), food shape (Sevilla and Kahn 2014), portion size (Zlatevska, Dubelaar, and Holden 2014), labeling (Wansink and Chandon 2006), and package design (Orth and Malkewitz 2008). Color is an important element of the package design and is usually the first element that consumers notice and recognize when shopping in the grocery store. Package color has also been used by many businesses as a tool of communication. Past research has supported this practice by illustrating how colors carry meanings that can have important influence on people's perceptions and behavior (for review, see Elliot and Maier 2014). Nevertheless, existing research has primarily focused on three basic colors of red, blue, and green; with little attention to the effect of dark versus light package colors (Meier et al. 2004).

In this research, we examine the influence of dark versus light package color on consumers' perceptions of tastiness and healthiness, as well as buying intentions. Based on the conceptual metaphor theory (Lakoff & Johnson 1980), we argue that colors' ability to carry symbolic meanings can trigger associations of tastiness and healthiness. In a series of six studies including lab studies and a field experiment, we demonstrate that food is perceived as tastier in a dark package and healthier in a light package. Importantly, we find that consumers' higher likelihood to purchase hedonic food in dark and healthy food in light packages is mediated by the perceived congruency (dark-hedonic and light-healthy) between package color and food type. We also test the moderating effects of brand familiarity, health claim, as well as actual tasting on this relationship. Our research makes important contributions to research in food consumption and provides tangible implications for marketers as well as policy makers on the subtle yet powerful effect of package color on consumer perceptions and willingness to buy.

In **Study 1**, a field experiment was conducted using a one factor, two level (package color: dark, light) between-subjects design (n=97). We found a significant effect of package color on taste perceptions ($F(1,95)=5.31$, $p<.05$), with potato chips in the dark package rated as tastier ($M_{dark}=4.88$, $M_{light}=4.16$, $p<.05$). A marginal effect of package color on buying intention emerged ($F(1,95)=2.84$, $p<.10$) such that higher likelihood to purchase the chips was associated with the dark (vs. light) package ($M_{dark}=4.15$, $M_{light}=3.67$, $p<.10$).

In **Study 2a,** a 2 (package color: dark, light) x 2 (food type: hedonic–ice cream, healthy-muesli) between-subjects design (n=158) was used. A main effect of package color on perceived tastiness ($F(1,154)=10.15$, $p<.01$) emerged with both foods rated as tastier in dark packages. We also found a significant main effect ($F(1,154)=4.02$, $p<.05$) of color on healthiness with both food products perceived as healthier in light packages. Further, we found a significant two-way interaction effect on buying intention ($F(1,153)=10.96$, $p<.01$). Participants indicated a higher likelihood to purchase hedonic food in a dark package ($M_{hedonic-dark}=4.72$, $M_{hedonic-light}=4.22$, $p=.08$) and healthy food in a light package ($M_{healthy-dark}=4.04$, $M_{healthy-light}=4.81$, $p<.01$).

Study 2b replicated the findings of Study 2A and tested the mediating role of perceived congruency. Specifically, we found a significant color by food type interaction effect on perceived congruency ($F(1,239)=13.36$, $p<.001$), indicating higher congruency for hedonic food in dark package and healthy food in light package. Mediation analysis using PROCESS Model 8 (Hayes 2013) showed that the indirect effect of package color is significant for both foods (hedonic food: $\beta=-.2487$, SE=.1257, 95% CI=[-.5371, -.0365]; healthy food: $\beta=-.2487$, SE=.1257, 95% CI=[-.5371, -.0365]).

In **Study 3**, we examined the effect of package colors in three stages – before tasting, immediately after tasting, and after three months. Study 3's design, prior to tasting, was similar to Study 2 and replicated findings from studies 1-2 but when participants had an opportunity to taste (stage 2), the package color effect was attenuated. Interestingly however, taste perceptions as well as buying intentions were restored to the original levels after three months delay (stage 3).

In **Study 4**, we employed a 2 (color: dark, light) x 2 (health claim (oven roasted): yes, no) between-subject experimental design (n=336). The main effect of health claim on buying intentions was significant ($F(1,332)=12.72$, $p<.001$); respondents were more likely to purchase hedonic food product with the health claim ($M_{health-claim}=4.01$, $M_{no-claim}=3.43$, $p<.001$). Among the four conditions, respondents were most likely to purchase potato chips with a health claim in a dark package (M=4.28, $p_s<.05$); also rated as tastiest.

In studies 1-4, we had focused on products without a brand name. **Study 5** employed a one factor, three level (color: dark, light, original) between-subject design (n=229) using a well-known brand of potato chips. A color x brand familiarity interaction effect emerged ($F(2,223)=3.45$, $p<.05$), such that package color effects were stronger under low (vs. high) brand familiarity. Consumers with low brand familiarity displayed significantly higher intentions to buy the potato chips in dark versus the original package ($M_{dark}=4.14$, $M_{original}=2.67$, $p<.05$), and versus the light package ($M_{light}=3.05$, $p<.05$). For consumers who were familiar with the brand, intention to buy the dark package was similar to the original package ($M_{dark}=4.38$, $M_{original}=4.43$, $p>.1$) and the light package ($M_{light}=3.90$, p=.1). The difference between intention to buy the original versus light package was marginally significant (p=.05).

In this research, we proposed an unexplored effect of light and dark color in food packages. Our findings suggest that dark packages benefit hedonic foods, while light packages favor healthy foods. Actual tasting weakens the influence of package color; however, this shift is not stable, and the color effect re-emerges after a time delay. In contrast, adding a health claim strengthens the influence of package color, making hedonic food in dark package with a health-claim most attractive to consumers. Our findings have tangible implications for marketers especially, in the case of new products as color effect is most effective when the brand is unknown or less familiar. Importantly, the findings suggest the potential for deleterious effect of package color on consumers in negative consumption categories such as alcohol and tobacco. Thus, important insights emerge for policy makers as well.

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"How Do You Like That One?" or "Which Do You Like Better?": Being Asked to Evaluate Options in Isolation or Pairwise and the Probability of Order-Effects-in-Choice

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EXTENDED ABSTRACT

When choosing from items in a choice set, serial position has an effect on choice (e.g., Mantonakis et al. 2009), with people preferring items evaluated first or last (i.e., order-effects-in-choice). However, consumer choices typically involve interactions with salespeople assisting in the evaluation process. For example, salespeople may ask, "How do you like this one?" (i.e., isolation-strategy). Or, "Which do you like better between these two?" (i.e., pairwise-strategy). Although questions like these are common, existing research has yet to examine how these subtle variations in evaluation guidance can influence choice. The objective of this present research is to examine how guiding a consumer to follow an isolation- versus pairwise-strategy can influence the likelihood of order-effects-in-choice.

The underlying process of order-effects revolves around an attention biases. When a choice set is presented, items are experienced in sequence and attention does not remain constant throughout the evaluation process (Bruine deBruine 2006; Carney and Banaji 2012; Dean 1980; Miller and Krosnick 1998; O'Brien and Ellsworth 2012; Sulmont-Rossé et al. 2008). Even category experts experience such attention biases that result in order-effects (e.g., Mantonakis et al. 2009).

When choosing from a choice-set, prior research suggests that high-category-knowledge (HCK) consumers naturally follow a pairwise-strategy (e.g., Mantonakis et al. 2009), while low-category-knowledge (LCK) consumers naturally follow an isolation-strategy (e.g., Bettman and Park 1980). It is also broadly accepted that following a process and completing tasks that are congruent with existing mental representations should be considered normal and not require much attention but following an incongruent process should heighten attention (e.g., Meyers-Levy and Tybout 1989). Therefore, because order-effects are the result of an attention bias, and that LCK and HCK consumers naturally follow an isolation- and pairwise-strategy respectively, then guiding consumers to follow their incongruent (congruent) strategy should decrease (increase) the likelihood of order-effects. And that this is the result of increased (decreased) attention required to evaluate a choice set following an incongruent (congruent) strategy.

Overview of Studies

Study 1 first tests whether being guided to follow an isolation- or pairwise-strategy can amplify or reduce the likelihood of order-effects-in-choice. Study 2 provides statistical evidence for our proposed mediator of attention. Lastly, Study 3 provides experimental evidence for our proposed mediator by manipulating task attention.

Study 1. 90 participants drank and chose a favorite from a sequence of five wine samples following either an Isolation- or Pairwise-strategy. For those in the Isolation condition, after sampling each wine, they were asked, "How would you rate this wine sample?" before moving onto the next and choosing a favorite at the end. For those in the Pairwise condition, after sampling the first two wines, they were asked, "Which is your favorite between these two?" They then compared the winner to the next presented wine, and so on. The final wine chosen was declared their overall favorite. Unknown to participants, to control for the quality of each sample, all samples were identical. Participants also completed a wine knowledge questionnaire (Hughson and Boakes 2001). A binary dependent variable was created to determine if choice was consistent with an order-effect (1 = the first or last wine was chosen, 0 = wine in positions 2, 3, or 4 was chosen).

Results of a binary logistic regression showed that the Guided Evaluation Questions X Wine Expertise interaction was significant (β = -1.24, p = .008). Floodlight analysis showed that when wine knowledge was less than -0.88 ($\beta_{JN\text{-}low}$ = 1.14, p = .05) being guided to follow an isolation-strategy was more likely to result in order-effects than a pairwise-strategy. Inversely, when wine knowledge was more than 1.35 ($\beta_{JN\text{-}high}$ = -1.64, p = .05), pairwise was more likely to result in order-effects than an isolation-strategy. These results provide support for our prediction that the likelihood of order-effects when being guided to follow either an isolation- or pairwise-strategy depends on product category knowledge.

Study 2. In the context of music choice, 272 participants engaged in a 3(Guided Strategy: Isolation vs. Pairwise vs. No-Guidance) between-participants X Continuous (Category Knowledge) experiment. Both the isolation and pairwise conditions guidance procedures were identical to that of Study 1, however a third no-guidance (i.e., natural-strategy) condition was included as a comparison condition. The objective was to examine whether varying levels of attention towards the task mediated the effect.

Results of a binary logistic regression and floodlight analysis replicated those of Study 1. Furthermore, mediation analysis supported that as music knowledge increased, attention towards the task (i.e., time spent on task) increased for those being guided to follow an isolation-strategy but decreased for those following a pairwise-strategy. Results supported that as attention increased the likelihood of an order-effect decreased (β = -.003, p = .042) and the index of moderated mediation did not span zero when both isolation ($CI_{95\%}$: -.28 to -.01) and pairwise ($CI_{95\%}$: .01 to .24) strategies were focal predictors.

Study 3. 538 participants followed a design and procedure that was identical to Study 2, however participants were either told that if their choice was also chosen as the universal favorite that they will be entered into a draw to receive an additional prize (High Attention) or not (Default Attention) which is known to increase attention (Chattopadhyay and Nedungadi 1992).

Results replicated Study 2 within the Default Attention condition, where the Guided Evaluation Questions X Music Knowledge interactions were significant when both the isolation (β = -.48, p = .067) and pairwise (β = .51, p = .037) strategies were the focal comparison against the no-guidance condition. However, the same interactions were not significant in the High Attention condition (ps > .75).

Conclusion

The results of Studies 1-3 showed that both isolation- and pairwise-strategies can result in order-effects, but this effect depends on consumer product category knowledge. Specifically, when evaluating items in isolation, order-effects are less likely for HCK versus LCK consumers. However, when evaluating items following a pairwise-strategy, order-effects were less likely for LCK than HCK consumers. Further evidence was provided that this effect is driven by increased levels of attention from following an incongruent evaluation strategy.

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Decision Making for Others Involving Risk: A Review and Meta-Analysis

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EXTENDED ABSTRACT

Sartre says when we choose, we choose for others (1943) – implying that when people make a choice, they make it not only for their own consumption but for others' consumption as well. Sartre's observation hints that decision making is fundamentally social and interpersonal, with inputs and outputs that extend beyond the individual decision maker. For example, when someone accepts a risky gamble and wins a considerable sum of money, the winnings will not only benefit the winner, but benefit others whom are close to the winner. Likewise, if someone loses a lot of money, close others will be adversely affected in kind. However, most research on decision making treats decision making like it is solitary. With relatively few exceptions (e.g., Gorlin and Dhar 2013, Lamberton 2018), the literature has not considered, much less tested, the special role that others' consumption may play when making decisions. In the current research, we examine the most straightforward type of decision that pertains to others' consumption: a decision that is made by one person for another, in which the other person (for whom the decision is made) bears the direct ends of the choice. In particular, we focus on whether people make riskier decisions for others than they make for themselves.

Recently, there has been a growing interest in this question. In the last five years alone, we have identified 42 papers on this topic. However, the accumulating evidence to date, as manifested in over 100 findings, has been inconclusive. For example, a number of studies have found strong instances of a "risky shift" – i.e., a tendency to make riskier choices for others – while other studies have found no such effect or have found that choices for others instead generate a "cautious shift" – i.e., a tendency to make more cautious choices for others. Considering the mixed state of the research, we conducted a meta-analysis by collecting and reviewing a variety of findings from across the social sciences, in the service of shedding light on this important and practically-relevant question, *do people make riskier choices for others?*

How important is this question? Very; because the answer has important theoretical and practical, marketing implications. From a theoretical perspective, the most widespread model in research on decision making, prospect theory (Tversky and Kahneman 1992), applies robustly to decisions people make for themselves; however recent advances have found that when it comes to choosing for others, the four-fold pattern of prospect theory is significantly altered (Zhang et al. 2017). Which begs the question, how useful are current theories in modeling interpersonal choices? Put simply, decision making for others is not incorporated in standard economic and psychology models despite that, from a practical perspective, these decisions are often made: by one account, over one-quarter of consumers report making at least 2-3 choices for others in a single week (Wu, Moore, and Fitzsimons 2019); and by another account, nearly 25% of purchase decisions that consumers make involve others (Garcia-Rada, Anik, and Ariely 2019). What is more, because of the wide proliferation of choice, an oft-cited solution for managing choice is to outsource it (Reich 2002). In light of this solution, a growing market of firms and apps are making it increasingly easier for people to "pitch" their decisions to others. For example, consumers can have their clothes, food, books, or home decor options chosen for them by others. And perhaps the clearest, most contemporary example of this trend is hiring a financial advisor. Reported in *Forbes*, nearly 40% of

Americans have one (Light 2018), which is a considerable portion of people who rely on someone else to make financial decisions on their behalf – precisely the kinds of decisions that involve risk.

Considering these implications, it is important to further understand when and whether people make riskier choices for others. Therefore, in this research we aim to thoroughly examine the literature on self-other differences in risky decision making on empirical and theoretical grounds. In the current research, we refer to choices people make for themselves as "personal choices," and respectively refer to choices people make for others as "interpersonal choices." Moreover, based on the literature on decision making, we refer to a difference in risk preferences as a "choice shift" which includes, more specifically, "risky shifts" and "cautious shifts" – each describing a respectively increased or decreased level of risk preference when choosing for others (Füllbrunn and Luhan 2015). Taken together, "interpersonal choice" and "choice shift" assemble into the portmanteau phrase, "interpersonal choice shift," which we use to refer to the difference in risk preference between personal and interpersonal choices, whereby a risky shift for others is indicative of a *positive* "interpersonal choice shift," and a cautious shift for others is indicative of a *negative* "interpersonal choice shift."

ARGUMENTS IN SUPPORT OF A RISKY SHIFT – A POSITIVE INTERPERSONAL CHOICE SHIFT

There are several reasons to expect a positive interpersonal choice shift. For example, as a result of the psychological distance between the self and others, people who choose for others tend not to focus on the minutiae of a choice; instead they tend to focus more broadly and more optimistically on the positive rewards associated with a choice (Liu et al. 2018, Polman 2012a, 2012b, Polman and Emich 2011). For example, when reporting on the reasons for making a risky choice, one study found that people who chose for others indicated significantly more positive reasons and fewer negative reasons compared to people who chose for themselves (Beisswanger et al. 2003). This differential focus on choice upsides versus downsides has direct implications for choices pertaining to risk, by dint of such choices generating either positive or negative consequences (Higgins 2002). For example, deciding to invest $10,000 in the stock market today could result in future gains (a positive consequence) or future losses (a negative consequence). These choices (and choices in general) are guided by people's perceptions of the potential consequences (Mellers 2000). And research shows that people who choose for others appear more fixated on the potentially positive consequences than on the negative consequences (Liu et al. 2018; Polman 2012a). This particular focus not only leads people to prefer risky (vs. more cautious) options (Lu et al. 2016), but also coincides with people choosing other kinds of positive, pleasure-seeking options for others – e.g., people who make choices for others prefer choosing more hedonic (vs. utilitarian) options, desirable (vs. feasible) options, and indulgent (vs. conservative) options (Laran 2010, Lu, Liu, and Fang 2016, Lu, Xie, and Xu 2013). Indeed, related research has found that people report enjoying making others' choices more than their own (Polman and Vohs 2016), and are more likely to switch from the status-quo when making choices for others (Lu and Xie 2014). Which is to say that when people focus disproportionately on the benefits of an option, they will prefer choosing a risky option over a safe option – because a risky option renders (potentially) a more beneficial outcome.

An alternative reason why people may prefer riskier options for others is that they assess risky prospects as being subjectively less risky when the consequences involve others than when they involve the self (Mengarelli et al. 2014). This explanation is different from the previous explanation in that it suggests that all things equal, people may not *say* that they prefer riskier options for others; however, because they mentally assess the same level of risk as being subjectively smaller for others than for the self, it would appear as though they choose and accept more risk for others. That is, a 20% loss for someone else may feel like a subjectively smaller overall loss than a 20% loss for the self. Related research has found that the subjective risk associated with a prospect may vary according to socio-situational factors of a decision, such that a 20% risk in one case can feel more or less likely than a 20% risk in another case, despite the objective chance of risk being the same (Maglio and Polman 2016). Applied to making choices for others, this malleable view of probabilities is in line with the endowment effect, to the extent that people may not value or assess other people's prospects in the same manner as their own, and correspondingly, people may not assess others' potential gains or losses as highly as their own – akin to believing that others' investments are less valuable. In support, recent research has found that people believe their own money has more purchasing power than others' money (Polman, Effron, and Thomas 2018). Thus, when making risky decisions for others, this could imply that people will be riskier when investing other people's money, on account of believing that others' money is worth less than their own. In other words, people may feel like risking (and potentially losing) other people's money is less severe than risking and losing their own money.

ARGUMENTS IN SUPPORT OF A CAUTIOUS SHIFT – A NEGATIVE INTERPERSONAL CHOICE SHIFT

There are also reasons, however, to expect that choosing for others may sometimes lead to more cautious decisions. For example, as reported by Eriksen, Kvaløy, and Luzuriaga (2017), people indicated that if they were to make a choice for someone else, they would make a less risky choice for him or her. Possibly, this belief is related to the potential blame or felt accountability that people anticipate when making a choice for someone else (Leonhardt, Keller, and Pechmann 2011). Because bad decisions can have a psychologically stronger effect than good decisions (Baumeister et al. 2001), decision makers may prefer a cautious choice that minimizes potential retributive punishment (Lerner and Tetlock 1999). What is more, making a poor choice, especially a poor choice for someone else, may threaten a decision maker's sense of competence, as not just the self but others will know of the poor choice (Larrick 1993). Likewise, when people choose for others, they may feel like they will have to justify their choices to others, which could lead them to choose less risky options since cautious options may be more defensible (Chang et al. 2012). Along these lines, research has shown that people do not merely trifle in their decisions for others as though they make them less thoughtfully than their own choices. On the contrary, research has shown that in some instances people make choices for others more thoroughly than their own (Polman 2018). Relatedly, research has shown that people carefully select options for others that will not offend them (Liu et al. 2013).

META-ANALYSIS

Given the unsettled state of the field indicated by these opposing reasons for a positive and negative interpersonal choice shift, it is important to further understand when people make riskier (or

less cautious) choices for others. Therefore, in the following section we show the main result of a meta-analysis of all experimental studies we could find that compared risk preferences in personal and interpersonal decisions. Our set of studies consisted of 71 published and unpublished papers that reported 128 tests/findings with 14,443 data points. We integrated the results of all experiments by calculating a random effects model, using the Hunter and Schmidt method. A positive *d* indicates a positive interpersonal choice shift – i.e., a risky shift.

Among the 128 effects, our results indicate a significant though small overall effect size for a risky interpersonal choice shift. The mean effect size of the difference in risk preference between personal and interpersonal decisions is $d = 0.105$ (95% confidence interval: [0.024, 0.186]). Furthermore, a high amount of the variation across effects, 88.36%, was found to be due to an underlying heterogeneity in the effect size, which indicates the existence of possible moderators (Q = 1106.25, p < .001). Note, we conducted a battery of robustness checks (including publication bias checks) that support and mirror the main effect size.

At first glance, our main finding suggests that there is only a small difference in favor of a risky shift when people choose for others. But as we aim to demonstrate next (briefly), the interesting question is not *whether* choices for others are riskier but *when* such choices are riskier.

To illustrate, consider a study showing that the difference in risk preferences between making decisions for the self and others is a function of whether decision makers are in a gain or loss frame (Zhang et al. 2017). In this study, participants in a gain frame made more risky decisions for others than for themselves ($d = 0.383$). In contrast, participants in a loss frame made more cautious decisions for others than for themselves ($d = -0.323$). Thus, the data in both frames lend support to the risk-as-feelings hypothesis: a difference in risk preferences between making decisions for the self and others, according to gain and loss frame – whereby in the gain frame, a risky shift emerges, and in the loss frame, a cautious shift. However, because the effects are in the opposite directions, simply averaging the two data points produces an overall negligible effect ($d = 0.030$).

Thus, in our meta-analysis and review, we document not only *whether* decisions for others are riskier, but *when* (and when such decisions are less risky). Specifically, we identify three key moderating factors, among others that can reliably predict when decisions for others will be riskier, or more cautious: (1) the identity of the choice recipient, such as whether people choose for friends, strangers, or a more vulnerable group, such as children or medical patients; (2) the decision frame, which represents whether the decision is gain- or loss-framed (or both), or alternatively if the decision risk is social in nature rather than financial; and (3) the theoretical lens or explanation favored, which could be influencing what kind of decision researchers choose to investigate, considering some decisions are more or less relevant according to the explanation that is offered.

Going beyond an investigation of moderators, we further discuss what is distinctly unique about decision making for others – how such choices are not just different in degree from personal choices but different in kind.

CONCLUSION

In the present research, we review and analyze the past and current work on decision making for others involving risk, comparing these decisions with decisions people make for themselves. We found a small difference – indicating that decisions for others are riskier than decisions people make for themselves. However, it bears noting that interpersonal choice shifts are a relatively robust phe-

nomenon, occurring in the form of risky *and* cautious shifts. This antipodal pattern of findings reminds us of the adage, "the opposite of a great truth is also true" – which we think aptly summarizes the conclusions from our meta-analysis, and, is a potentially useful approach for others to follow. When researchers consider not just when an effect will be observed, but when the opposite will be observed, we should see more compelling evidence of the differences between personal and interpersonal decision making.

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When Technology Backfires and When it Succeeds:
Positive and Negative Effects of Eco-Efficient Automation on Consumers' Choices

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EXTENDED ABSTRACT

Automation is defined as the execution, by means of an object or system, of tasks that previously belonged to a human (Gandino et al., 2009; Hengstler, Enkel, & Duelli, 2016). More and more products contain varying levels of automation, in particular eco-features that allow the product to automatically manage aspects of energy consumption. In fact, it's important to note that while there are many different kinds of automated products many of them share the goal of "sustainability" and, more accurately, energy efficiency (Li, Li, Mak, & Tang, 2016).

With regards to sustainable automation, it is not clear what an emphasis on such a product attribute will trigger in the mind of a potential buyer. Emphasizing eco-features in automated products might have unintended consequences on consumption behaviour, such as inducing people to abdicate their control of their energy consumption, which may ultimately result in excessive consumption (Murtagh, Gatersleben, Cowen, & Uzzell, 2015). Furthermore, products described as sustainable may be viewed as "gentler" than standard products which detracts from how effective they are perceived to be (Luchs, et al., 2010). However, labelling a product as sustainable may also lead to reduced consumption, because of the activation of a prosocial focus and a concern for public wellbeing, especially when consumers feel related to others (Farmer et al., 2017).

To advance knowledge in this field, the present research hypothesizes that, on the one hand, emphasizing eco-efficient features in automated products can lead to indulgent product choices, because consumers will tend to abdicate responsibility for the consequences of their actions (Murtagh et al., 2015). On the other hand, the sustainable nature of these products may induce consumers to limit consumption (Farmer et al., 2017). Additionally, it has been established that by reminding people about how connected they are to others and their obligations to others it is possible to deter them from indulging in consumption (Nenkov & Scott, 2014). Pavey, Greitemeyer, & Sparks (2011) also found that sense of relatedness to others is associated with positive societal behaviours and intentions. For this reason, we expect that individuals' relatedness to others may limit indulgence when abdication of responsibility takes place.

Three empirical studies offer evidence for these effects. Study 1 proves that the effect of automation on consumers' choice is mediated by both abdication of responsibility and consumers' prosocial focus. The study involved 289 online respondents who were presented with a brief scenario that instructed them to imagine that they were about to purchase an eco-efficient automated (vs. standard) electric car. Participants could choose their car among seven different versions, with increasing top speed. Following their choice, they completed a measure of abdication of responsibility (Murtagh et al., 2015) and of prosocial focus (Farmer et al., 2017). Then, we used a mediation model to assess if participants' choices were driven by abdication of responsibility and by prosocial focus. We found significant and positive impacts of sustainable automation on abdication of responsibility ($b = .59$, $p = .002$) and prosocial focus ($b = .68$, $p = .001$). In turn, abdication of responsibility exerted a significant and positive impact on respondents' choice ($b = .13$, $p = .038$), whereas prosocial focus exerted a significant negative effect on respondents' choice ($b = -.18$, $p = .001$). Thus, sustainable automation indirectly lead respondents' to indulgent product choices (via abdication of responsibility), but, at the same time, it lead them to curtail indulgence (via prosocial focus).

Study 2 focused on abdication of responsibility and randomly assigned a sample of online respondents (N = 302) either to an eco-automated product – a TV – scenario or to a standard product scenario designed as in Study 1. Participants chose their automated (vs standard) TV among seven different versions, which only differed in screen size and electricity consumption, then completed the three-item measure of abdication of responsibility used in Study 1. Again, we used a mediation model to assess whether participants assigned to the eco-automated TV condition tended to abdicate responsibility for their consumption, and, in turn, make more indulgent product choices. We found a marginally significant negative impact of the eco-automation condition on participants' choice ($b = -.31$, $p = .05$), suggesting that sustainable automation induced participants to choose a smaller version of the product. However, we also found a significant positive effect of sustainable automation on abdication of responsibility ($b = .52$, $p = .004$), which in turn, exerted a significant and positive effect on participants' choice ($b = .17$, $p = .001$). Thus, sustainable automation exerted an indirect effect on participants' choices via abdication of responsibility.

Study 3 confirmed that sustainable automation may increase consumption via abdication of responsibility, but such an effect is weak for people who feel highly related to others. Participants (N = 204) were assigned either to an eco-efficient automated floodlight or to a standard floodlight scenario, and they could choose among seven different product versions with increasing power (and energy consumption). They also completed the measure of abdication of responsibility used in the previous studies and a measure of relatedness to other people (Deci & Ryan, 2000). We used a moderated mediation model which highlighted a significant negative impact of sustainable automation on participants' choice ($b = -.54$, $p = .013$) and a significant positive effect of sustainable automation on abdication of responsibility ($b = 1.06$, $p < .001$), which in turn, exerted a significant and positive effect on participants' choice ($b = .90$, $p = .006$). Additionally, there was a significant negative interaction effect of relatedness on abdication of responsibility ($b = -.15$, $p = .021$).

The obtained results bridge the findings of previous studies on the impact of automation and sustainability on consumption behaviour and demonstrate that products, which simultaneously incorporate these two features, may lead to two opposite consumption patterns: indulgence and restraint. Second, this research further supports the idea that social connectedness leads consumers to behave in a sustainable way. We found indeed that, for people who feel connected to others, the impact of abdication of responsibility on indulgent consumption is less strong than for other people.

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Pink Tax Versus Blue Tax:
Insights Generated by the Direct Measurement of Price Elasticity of Demand

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EXTENDED ABSTRACT

According to numerous News stories (e.g., US News 2016; Business insider 2016) and government-sponsored studies (NYC consumer affairs 2015) companies tend to charge women a "gender tax" and women's products often cost more than comparable men's products. These observations raise an important question: Is charging women a price surcharge conducive to higher revenues? In a Free Market context, where prices are determined by supply and demand, the price elasticity of demand will determine the effectiveness of pricing strategies.

The existing theoretical evidence suggests that gender may influence the price elasticity in at least three substantive ways. First, to be price sensitive, consumers need to be aware that lower prices for comparable products exit. Therefore, a prerequisite for an elastic demand is consumers' ability and willingness to engage in comprehensive processing of the available information and make accurate product judgments. The Selectivity model (Meyers-Levy and Maheswaran 1991; Meyers-Levy and Sternthal 1991) suggests that women are more likely than men to engage in effortful and comprehensive processing of information (Darley and Smith 1995). Second, men are more inclined than women to be status-conscious (Paris et al. 2009). Therefore, men should have a higher propensity than women to seek and value prestige (driven by higher prices) as a core benefit in products or services. Finally, the average income is likely to affect price sensitivity. A higher disposable income translates into a lower relative cost in consumers' budget and results in lower price sensitivity (Kubler et al. 2018). According to the United States Department of Labor, women's median income was 81.8 percent of men's median income in 2017 (Bureau of Labor Statistics 2018). These factors imply that women should be more price sensitive than men. Nevertheless, there is a gap in the literature regarding a direct measurement of the effect of gender on the price elasticity of demand.

In this article, we provide strong empirical evidence supporting two substantive findings: First, using a large longitudinal sample of secondary data, we directly measure the price elasticity of demand and show that women are more price sensitive than men. Second, using the population dataset of all the comparable men and women products sold on the world's largest retailer, we show that a pricing algorithm devoid of human biases would indeed price men's products higher than women's products.

In study 1, we selected 8000 shoes (N_{women} = 4000), which represented about 20% of all the shoes that were sold on Amazon.com. The sample included numerous sub-categories of shoes containing formal shoes and athletic shoes (soccer, running, baseball, basketball, bowling, etc.). We collected the information of those products for 45 consecutive days, creating a sample of 360,000 product/day observations.

Following the instructions in the literature, we used the natural logarithm of the sales rank of the products on Amazon [i.e., Ln (Rank)] as a proxy for sales. Extant literature suggests that the relationship between log ranks and log sales is close to linear (Chevalier and Mayzlin 2006). Subsequently, we calculated the price elasticity of demand for products by calculating the percentage change in Ln (Rank) divided by percentage change in Price for each product in every two consecutive days. To test the effect of gender on price elas-

ticity, we conducted a Hierarchical Linear Modeling (HLM) analysis using the following model:

$$(1) \qquad p_{ibd} = \beta_{0\,ibd} + \beta_{1\,ibd} \times g_{ibd} + \beta_{2\,ibd} \times X_{ibd} + b_{bd} + t_d + e_{ibd}$$

In the above model, p_{ibd} is the price elasticity of product i, brand b, and day d; g_{ibd} is the dummy variable for the product category (men coded as 0 and women as 1); X_{ibd} is a vector of control variables including online review volume, online review valence, type of shoes (subcategories; e.g., soccer, running, slippers), number of answered questions, number of words in title, and number of words in description of product; b_{bd} is brand b and day d, and t_d is the day number. Therefore, we controlled for all the variation caused by the measurable confounding variables. The results of an HLM analysis revealed that women were significantly more price sensitive than men (β_1 = 2.48). Follow-up coefficient analysis revealed that the observed effect of gender on the price elasticity of demand was consistent across brands, product subcategories, and days of observation. These findings make a substantive theoretical (and practical) contribution by showing that women indeed are more price sensitive than men. In the shoe product category, the observed difference in price elasticity resulted in a 44.6% "blue tax" on men's products ($88.66 vs. $61.30).

Study 2 was designed to test the generalizability of the findings of study 1 by examining price dynamics in 14 product categories spanning five industries sold on Amazon.com. In study 2, instead of creating a sample, we created the population database containing the information of 184,216 unique products that were sold in 14 product categories on Amazon.com.

From a theoretical perspective, the price elasticity of demand is the underlying mechanism that determines the average retail prices. Furthermore, Amazon.com uses an effective pricing algorithm that changes the prices in real time based on the measured price elasticity of demand. Therefore, if the findings of study 1 were generalizable beyond the shoe product category, we would expect to see significant price differences between men and women's products sold on Amazon.com.

Several statistical methods were used to examine the price differences between product categories and establish the robustness of findings. Study 2 offers strong evidence that Amazon charges men price premiums, and the effect sizes are stable, consistent, and significant across 12 product categories spanning five industries. In other words, study 2 shows that, on Amazon.com, a product sold under the same brand name and with similar online review information (i.e., Volume and Valence) will be priced higher if it is sold to men rather than women. This observation is consistent with the findings of study 1 that price elasticity of demand is higher in women's (rather than men's) product categories.

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Perceived Persuasion Conveys a Threat to Consumers' Social Worth

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EXTENDED ABSTRACT

Consumers often get upset and react badly to marketers' attempts to persuade them. Empirical work on consumers' reactions to persuasion attempts has shown a variety of negative reactions (Isaac and Grayson 2017), including negative attitudes towards salespeople (Brown and Krishna 2004; Campbell and Kirmani 2000; Decarlo 2005; Main et al. 2007; Puccinelli 2006; Reinhard et al. 2006), advertisements (Campbell 1995; Campbell and Keller 2003; Darke and Ritchie 2007), and brands (Ahluwalia and Burnkrant 2004; Wei et al. 2008). Prior work typically attributes these reactions to inferences of persuasion motives (Campbell and Kirmani 2000; Isaac and Grayson 2016; Kirmani and Zhu 2007); however, it is not entirely clear why these inferences should necessarily inspire such negative reactions. First, consumers know that marketers try to sell, and prior research shows that consumers expect this behaviour (Babin et al. 1995; Rule et al. 1985; Thompson 1972); therefore, it is surprising that consumers react so negatively to their confirmed expectations. Next, and importantly, the Persuasion Knowledge Model or PKM (Friestad and Wright 1994) – the theoretical basis for most of the empirical work on reactions to persuasion - makes no specific claims about the valence of consumers' responses to marketers' tactics. Rather, it suggests that consumers skillfully use their knowledge to form accurate attitudes and judgments (Friestad and Wright 1994).

The current work suggests that persuasion lowers consumers' social worth. Consumers draw a series of inferences from persuasion attempts that convey threatening social information. Consistent with prior work, perceiving a communication as persuasion likely activates consumers' persuasion knowledge. This research suggests, more specifically, that consumers interpret persuasion as an attempt to encourage them to engage in a behavior that is primarily designed to further the agent's interest. Critically, this likely conveys to consumers that the agent places their own interests above consumers' interests. Such inferences likely convey a low opinion of the focal consumer, threatening their social worth. Therefore, one of the reasons consumers can react so negatively to persuasion is because being the target of such attempts can convey threatening social information.

This work contributes to the literature on persuasion knowledge by highlighting a novel consequence of perceived persuasion (i.e., being the target of a persuasion attempt) – lowered social worth. Also, it provides a fine-grained understanding of the inferences involved in reactions to persuasion which allows us to make additional predictions about when and whether consumers will react negatively to persuasion attempts. Regarding managerial implications, it alerts marketers to an unintended yet harmful consequence of persuasion, allowing them to better incorporate the potential costs of persuasive strategies into their decision-making. Also, it provides insight into avoiding or mitigating some of the negative responses associated with perceptions of persuasion.

Study 1 (N=64) tests the basic effect with a single factor between subjects design. Participants read a short scenario about going to a store to buy a TV. They narrowed their search to two TVs – a reasonably priced TV and a more expensive TV with more features and a high-end look. Randomly assigned to one of two conditions, in the persuasion condition, the salesperson spent more time talking about the expensive TV, listing its features and benefits and highly recommending that they buy it. In the neutral condition, the sales-person spent equal time talking about each TV and recommending that customers make up their own mind about which TV they should buy. Participants completed several 1-7 scales assessing social worth (ie. Liked you, Thought highly of you, Did not think much of you (r), etc.), advantage-taking beliefs (ie. the salesperson was trying to gain at your expense, was trying to influence you to achieve their goals, favored their personal interests over yours, etc.), and several consumer reactions (ie. Store experience, Desire to Purchase, and Sincerity of the Salesperson). The results show that a persuasion (vs. neutral) communication lowered perceived social worth ($t(63)$= 2.26, p= .03, Ms= 3.16 vs. 3.73), increased advantage-taking beliefs ($t(63)$= -2.11, p= .04, Ms= 5.80 vs. 5.08), and decreased consumers' reactions, and they support simple and serial mediation.

Study 2 (N=244) replicates the basic effect and demonstrates when it attenuates, using a core element of the PKM, agent motives. A 2(Neutral vs. Persuasion) x3(Commission, Salary, No Incentive) between subjects design reveal that perceived persuasion (vs. neutral) lowers social worth when the salesperson worked by commission only ($F(1, 238)$= 31.25, $p < .001$, Ms= 4.04 vs. 5.18) vs. salary only ($F(1, 238)$= 6.22, $p = .01$, Ms= 4.67 vs. 5.18), demonstrating an attenuated effect ($F(1, 238)$= 4.79, p= .03).

Study 3 (N=166) conceptually replicates attenuation of the effect using a distinct message factor, personalness of the message. A 2(Communication: Neutral vs. Persuasion) x2(Message Personalness: Low vs. High) between subjects experiment supports moderation of the indirect effect. The confidence intervals around the mediated paths for the indirect effects were entirely below zero at when the message was less personal ($CI_{95\%}$= -.86 to -.52) and highly personal ($CI_{95\%}$= -1.12 to -.72), and the index of moderated mediation did not span zero ($CI_{95\%}$= -.47 to -.02), indicating an attenuation of the effect when the message was less personal.

Study 4 (N=308), a single factor between subjects design, replicates the basic effect and demonstrates moderation using a relevant receiver factor, consumers' profit-acceptability (ie. I am not bothered by salespeople who try to make money from me, Salespeople who sell to me are just doing their job, etc.). The confidence intervals around the mediated paths for the indirect effects were entirely below zero at one SD above ($CI_{95\%}$= -.67 to -.39) and below the mean of Profit Acceptability ($CI_{95\%}$= -.85 to -.56), and the index of moderated mediation did not span zero ($CI_{95\%}$= .03 to .16). Thus, the effect attenuated among consumers who are less likely to interpret profit-seeking as a violation of interpersonal conduct.

Study 5 (N=237) tests the generalizability of the basic effect across different communication styles using a 2(Neutral vs. Persuasion) x3(Salesperson, Mass Advertisement, Online-Targeted Advertisement) between subjects experiment. This study replicated the negative effect of persuasion on social worth within interpersonal ($F(1, 355)$= 7.34, $p = .007$, Ms= 4.16 vs. 4.65) and mass communication contexts ($F(1, 355)$= 3.24, $p = .073$, Ms= 4.03 vs. 4.38). In the targeted condition however, inferences of social worth were equivalent regardless of the content of the message ($F(1, 355)$= .58, $p = .45$, Ms= 4.26 vs. 4.12), which suggests that targeted online messages may not be especially effective at improving consumers' responses.

Concisely, this research supports the theorizing that consumers engage in a series of spontaneous inferences that make them think that marketers have a low opinion of them. This research provides

a novel perspective regarding consumers' negative reactions to persuasion tactics beyond appealing to agents' persuasion motives, and it emphasizes the importance for marketers to recognize the social consequences of persuasion tactics and the effects they have on consumers' responses and wellbeing.

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Tickets, Tweets, and Terror: Understanding Consumer Reactions to High-Profile Event Organization in a Climate of Heightened Insecurity

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EXTENDED ABSTRACT

How do consumers cope in an environment of perceived risk? To address this inquiry, we show how Twitter users express, discuss, and debate views and air emotions about an international event staged volitionally in an environment of insecurity. Specifically drawing on a dataset of 20,000 tweets and 15 in-depth interviews before and after a prominent cricket match in Pakistan, we explicate how emotions change from palpable fear to celebratory relief across time. We note that consumers use Twitter not only to communicate with each other, but also to comment on and incite the role of other stakeholders to address the uncertainty. We also find that although a range of market-place sentiments are brought to light in the aforementioned situation, it is primarily through expressions of (mis-)trust in higher authorities, ignoring situation seriousness, and furthering personal agendas that consumers navigate panic-stricken moments.

Fear has been relatively under-investigated in consumer research. Researchers have limited themselves to studying the emotion in relation to advertising response (Hastings, Stead, and Webb 2004; Kay 1972; Latour and Nataraajan 1993; LaTour, Snipes, and Bliss 1996; Quester 2005; Ray and Wilkie 1970; Spence and Moinpour 1972; Sternthal and Craig 1974). While these approaches have mainly exposed psychological response to the emotion (Griskevicius et al. 2009), fear as a social phenomenon remains to be explicated. In an increasingly complex world where not only people live in climates of fear (e.g. terror-struck areas such as Afghanistan and Syria), but also where globalization and news reports make it easier to relate to such events, fear is an important phenomenon that needs to be theorized socio-culturally. This is the primary focus of this study.

The current study uses Twitter data and in-depth interviews to understand consumer coping in an environment of heightened insecurity. Specifically, we look at tweets from mainly Pakistani spectators regarding an international cricket match staged in Lahore, Pakistan. The investigation also uses the first author's ethnographic observational data, pre- and post-event interviews and online news coverage before and after the event.

FINDINGS

We found a diversity of emotions surface on the Twitter stream. Our data can corroborate findings from Golpadas (2014) article where the marketplace is replete with expressions of contempt for villains, concern for victims and celebration of heroes across consumers. We find anger at government policy, disgust at terroristic acts, care for humanity, anxiety about a risky event, joy about the successful holding of an event and hope for perpetual peace. We also find that consumers alleviate fear through ignoring situation seriousness. The circumstances also make it opportune for some consumers to advocate or renounce government actions to further political support. We also find mixed emotions in the same tweet.

We also found support for expressions of religiosity and god-fearingness. We interpret these comments as consumers' inclination to carry themselves at a time where events are beyond their control and fear invokes them to hold on to a support system. We believe that these feelings along with those regarding support for security agencies indicate a high level of (mis-)trust in expert systems.

DISCUSSION

From the results of this study, we can derive some contributory notes for existing literature.

IDEOLOGY BEHIND EMOTIONS

Golpadas (2014) reports that different sentiments have different functions. We find support for this idea, but enhance it as well. We find differing sentiments based on differing ideologies – for instance, religious ideology vs nationalistic ideology. While previous studies have investigated emotions and ideology separately, we report by showing how specific emotions are cast in a background of ideology. We also note that there can be differences in calibration (e.g. moderate for celebration of heroes, high for concern for victims) across consumers.

EMOTIONAL REACTION TO MARKETPLACE DECISIONS

While previous studies have found consumer reactions to unforeseen events (Humphreys and Thompson 2014) or brands, in our instance, we found that these emotional dispositions are expressed in relation to the act of organizing the event of the PSL final rather than a particular brand or company per se. The nuance is that people generally become polarized on how (and where) the event is staged rather than the event itself.

STEP-BY-STEP RETURN TO NORMALITY

This study proposes that the return to normality for society in general begins with understanding the socio-cultural forces operating in making the phenomena of insecurity and its perceptions possible and whether the means to combat it can be through staging normal life activities in artificially secure environments. This result expands socio-culturally what Celsi et al. found (Celsi et al. 1993) on an individual level, i.e. fear subsides as time proceeds and the more you partake in an event.

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Attachment Theory as the Sage Illuminating the Connection Amid Loneliness and FOMO

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EXTENDED ABSTRACT

According to Cigna (2018), nearly half of Americans report that they often feel lonely and left out. High rates of loneliness indicate that people are lonelier today than the past twenty years (Entis, 2016; McPherson, Smith-Lovin, & Brashears, 2006). This upsurge is connected to consumers' increasing reliance on ubiquitous technology such as mobile devices (Pew Research Center, 2018) and the ramifications this technology divulges through the Internet, text, applications, and social media. Additionally, today's communication is more often without in-person connections (DiTommaso, Fizell, & Robinson, 2015). At the same time people get together less often (Hampton, Sessions, & Her, 2011; Snell, 2017). These circumstances have precipitated an ensuing burden of loneliness, whereby individuals increasingly lack desired social and emotional connections in their lives (Perlman & Peplau, 1981). Lonely people attempt to correct their perceived relational deficits (Peplau & Perlman, 1979) by using technology and social media as a loneliness reduction strategy, but counterintuitively, it only increases their loneliness (Guo, Li, & Ito, 2013; Kross et al., 2013; Primack et al., 2017; Rauch, Deker, & Woodside, 2015) and amplifies fear of missing out, known colloquially as FOMO(Milyavskaya, Saffran, Hope, & Koestner, 2018; Przybylski, Murayama, DeHaan, & Gladwell, 2013). In this research, we present a conceptual model grounded in attachment theory which posits an attachment cycle wherein insecure attachments (anxiety and avoidance) lead to loneliness (social and emotional), which, in turn, leads to FOMO and concludes with retail patronage.

Hypothesis 1	*The more a consumer has (a) insecure anxiety attachment or (b) insecure avoidance attachment, the more s/he, will experience social loneliness.*
Hypothesis 2	*The more a consumer has (a) anxiety attachment and (b) avoidance attachment. the more s/he, will experience emotional loneliness. The more a consumer has insecure anxiety attachment, the more s/he will experience FOMO.*
Hypothesis 3	*The more a consumer has insecure anxiety attachment, the more s/he, will experience FOMO.*
Hypothesis 4	*The more a consumer has insecure avoidance attachment, the less s/he, will experience FOMO.*
Hypothesis 5	*The more a consumer experiences (a) social loneliness and (b) emotional loneliness the more s/he, will experience FOMO.*
Hypothesis 6	*The more a consumer experiences FOMO, the mores/he will exhibit retail patronage.*

TESTING AND FINDINGS

The study uses structural equation modeling partial least squares to analyze a sample of509 lonely consumers recruited through Qualtrics who recently shopped using the help of a retail salesperson. Through prequalification questions, respondents affirmed that they had experienced loneliness and participated in a shopping experience with an in-store salesperson in the last week. Results indicate that lonely consumers, insecure attachments (anxiety and avoidance) predict the relationship between loneliness (social and emotional) and FOMO. Support was found for all hypotheses except H4 and H5a. Findings suggest FOMO is a consumption-related emotion leading to consumers' retail patronage and purchase intention

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Improving Consumer Decisions by Reducing Connectedness with the Past Self:
Low Past-Self-Continuity Can Attenuate Sunk Cost Bias

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EXTENDED ABSTRACT

Sunk cost bias describes the tendency to continue an inferior course of action because one has invested significant, irrecoverable resources in it in the past. Traditional accounts have argued that the effect is particularly likely to occur when the decision-maker has personally made the prior investment, and thus feels responsible for it. Abandoning the investment would lead her to experience guilt, regret and wastefulness, and to avoid these consequences she would be more likely to stick to the previously chosen course of action. In contrast, when another individual has made the prior investment, the decision-maker should be less likely to anticipate negative feelings and should hence be less likely to display sunk cost bias (Arkes and Blumer 1985; Brockner and Rubin 1985; Staw 1976).

We propose that the extent to which an individual displays sunk cost bias may be influenced not only by whether she is the same person who has made the prior investment, but also by her sense of psychological connectedness to the past self, or past-self-continuity. In sunk cost settings, the prior investment and the focal decision are temporally separated; and research has shown that people may view their past self, to varying degrees, as though it were a different person (Sedikides et al 2016; Sedikides et al. 2015). We present evidence that when people feel less (vs. more) connected to their past self who made the initial investment, they are less likely to display sunk cost bias, because they feel less negatively about abandoning sunk costs.

In Study 1, participants (N = 241) imagined that three years ago they put up wallpaper in their bedroom at a cost of $400 (Bruine de Bruin et al. 2007). Now the wallpaper was stained, and so they had to decide whether to fix it or to take it off and paint the wall instead, which they may now prefer. Participants' tendency to fix the wallpaper constituted our measure of sunk cost bias. Then, participants completed a three-item measure of past-self-continuity (adapted from Bartels and Urminsky 2011). As predicted, lower past-self-continuity was associated with a lower tendency to display sunk cost bias ($p = .001$).

Study 2 (N = 501) manipulated past-self-continuity (high vs. low) and the size of sunk costs (low/$80 vs. high/$400) to test whether lower past-self-continuity causally mitigates sunk cost bias. We manipulated past-self-continuity using a trait stability task in which participants described how their core identity had either remained the same or changed in the past three years (adapted from Bartels and Urminsky 2011). We then measured sunk cost bias using the wallpaper scenario from study 1.

A two-way ANOVA revealed a main effect of past-self-continuity, such that those in the low-self-continuity-condition exhibited a lower tendency to fix the wallpaper than those in the high-self-continuity condition ($p = .001$), as well as the predicted interaction ($p = .05$). Planned contrasts showed that high (vs. low) sunk costs increased the tendency to fix the wallpaper in the high-self-continuity-condition ($p = .057$) but not in the low-past-self-continuity-condition ($p = .38$). Hence, we replicated the established sunk cost bias when past-self-continuity was high, but it was mitigated when past-self-continuity was low.

Further, low (vs. high) past-self-continuity decreased the tendency to fix the wallpaper in the high-cost-condition ($p < .001$) but not in low-cost-condition ($p = .37$). This rules out an alternative ac-

count according to which the low-past-self-continuity manipulation simply primed changes in the self, and thereby increased participants' tendency to switch course; this alternative account would predict the effect in both high- and low-cost.

Study 3 (N = 290) tested our proposed mechanism that low (vs. high) past-self-continuity decreases sunk cost bias by reducing negative affect when abandoning sunk costs. Participants imagined that a year ago, they had taken a photography class, rather than singing, and had bought expensive photography equipment. Following the same past-self-continuity manipulation as in study 2 (high vs. low), participants indicated whether this year they would continue with photography or switch to singing, which they felt they may prefer. We also assessed anticipated negative affect (wasteful, regretful, guilty) when abandoning photography.

Again, participants were less likely to stick with photography in the low (vs. high) past-self-continuity condition ($p = .073$). Further in line with our hypotheses, low-past-self-continuity participants anticipated lower negative affect, $p = .045$, which predicted the tendency to choose singing, $p < .001$. Hence, anticipated negative affect mediated the relationship between past-self-continuity and sunk cost bias (95% CI = -.36, -.02).

Finally, Study 4 (N = 256) included a control condition (in addition to high- and low-past-self-continuity) to test whether a low-past-self-continuity intervention can attenuate sunk cost bias relative to a baseline. We manipulated high or low past-self-continuity as in studies 2 and 3; participants in the control condition completed an unrelated writing task. We measured sunk cost bias with the high-cost wallpaper scenario from studies 1 and 2.

Replicating our prior findings, participants in the low-past-self-continuity condition were less likely to fix the wallpaper than participants in the high past-self-continuity condition ($p = .002$). Importantly, participants in the low past-self-continuity condition also showed a marginally lower tendency to fix the wallpaper than participants in the control condition ($p = .09$).

In sum, our research shows that the sunk cost fallacy can be mitigated by interventions that reduce the sense of connectedness to the past self who incurred the initial cost. This is because consumers with low (compared to high) past-self-continuity anticipate less negative feelings associated with abandoning past investments. While recent consumer behavior research focused on future-self-continuity and showed that increasing connectedness to the future self can help reduce myopia (Bartels and Urminsky 2011; Hershfield 2011), we find that reducing past-self-continuity can help consumers make better decisions by attenuating biases routed in the past.

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"MAGA" Hats and "HOPE" Shirts: Small Donors
Purchase Activism in Competitive Political Races

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EXTENDED ABSTRACT

Large contributions to political campaigns are seen as an investment, to ensure access and influence policy (Cooper et al. 2010; Gordon et al. 2007). By contrast, individual small donors are unlikely to impact political fortunes, but together make up a substantial and increasing share of the totals collected in U.S. political races (Bouton, et al. 2018). Yet the motivations of these donors have received little attention (Ansolabehere et al. 2003; Barber 2016). In this research, we explore these motivations by investigating how small donors choose to support their preferred candidate.

Though races may have multiple candidates, work in political science often characterizes them as a competition between two top candidates who position themselves as the favorite and challenger (Ceci and Kain 1982). The challengers can be subject to an "underdog effect," (Simon 1954) where they see a boost in voter support because of this disadvantage, and candidates may vie for the underdog positioning as it can boost fundraising (Mutz 1995; Rogers and Moore 2014). Beyond the *volume* of support offered, we argue that these underdog effects also manifest in different *forms*, in the choice between private monetary contributions and public purchases of campaign merchandise. Specifically, because underdog supporters wish to use their contribution to publicly express their views and make a political statement, they engage in purchase activism (Paharia, et al. 2014). This process builds on prior research that indicates consumers use their consumption choices to express personal views (Copeland 2014; Sandikci and Ekici 2009). We expect that in a competitive political race, small donors will be more likely to engage in purchase activism to support an underdog candidate compared to making a private contribution, relative to when the candidate is positioned as a favorite. To examine the proposed effects, we used a multi-method approach including surveys, experiment, and secondary data from several competitive U.S. political races.

In *Study 1 (Presidential Race 2016),* we surveyed Clinton (favorite, D) and Trump (underdog, R) supporters (*N*=154), who made a campaign contribution in October-November 2016. We recorded participants' contribution decision (private money contribution vs. merchandise purchase) and the amount. Controlling for contribution amount, underdog supporters were more likely to purchase campaign merchandise than supporters of the favorite candidate (*B*=0.66, *Wald* $\chi^2(1)$=3.42, *p*=.060; Underdog = 52%; Favorite = 38%).

In *Study 2 (Senate Race 2018),* we recruited Texas voters (N=128) in November before the 2018 election. Participants reported their support of Ted Cruz (favorite, R) and Beto O'Rourke (underdog, D), using a six-point scale. Next, participants imagined they had $20 to contribute to their preferred candidate. We measured how they would like to contribute using a binary choice: money donation vs. merchandise purchase. As support for the underdog candidate increased, so did likelihood of supporting the candidate by buying merchandise (*B*=.262, *Wald* $\chi^2(1)$=8.14, *p*=.004). Specifically, O'Rourke supporters were twice more likely to engage in purchase activism than Cruz supporters (44% vs. 21%). This replicates study 1 using a different political race and ruling out political affiliation as an alternative explanation.

In *Study 3 (Senate Runoff Race 2018)*, we recruited MTurk participants (N=159) from Mississippi and adjacent states the weekend prior to a runoff race (November 24-25). Participants first reported their preferred candidate for the runoff election. Next, we manipulated positioning of Hyde-Smith (favorite, R) by asking participants to read an article that either portrayed Hyde-Smith as a favorite or an underdog for the upcoming election. Finally, participants chose how they would support the candidate using the same choice from study 2. Participants were more likely to purchase campaign merchandise when Hyde-Smith was portrayed as underdog vs. favorite (*B*=1.41, *Wald* $\chi^2(1)$=6.68, *p*=.010; Underdog = 56%; Favorite = 23%).

Purchase activism on behalf of an underdog can be amplified by highlighting the competitive nature of the context (Paharia et al. 2014). Next, we directly investigate if increasing the salience of the competitive nature of the race amplifies small donor purchase activism for the supporters of underdog candidates.

In *Study 4 (Presidential Race 2016)*, in the weeks directly following election day we asked Clinton and Trump voters (N=275) to recall major campaign events during the 2016 election, with half recalling a positive event and the other recalling a negative one. Next, participants indicated how likely they would be to purchase candidate merchandise on the day of the event (1- not at all to 7 - very likely). Replicating prior studies, participants were more likely to purchase merchandise from the underdog than from the favorite candidate (*F*(1, 271) = 24.56, *p*<.001; M_{Trump} = 3.88, $M_{Clinton}$ = 2.68). Further, there were no main effect of event valence nor a candidate position by event valence interaction (*p*s>.36), suggesting that events, regardless of their valence, increase competitive salience and lead supporters of the underdog candidate to engage in purchase activism.

For *Study 5 (Presidential Race 2008 and 2016),* we examined how underdog positioning and competitive salience affect actual campaign contributions from small donors, using contribution data from FEC filings. Text analysis from contemporaneous news articles identified Trump (R, 2016) and Obama (D, 2008) as underdogs. We used key campaign events (identified using Google Trends) and polling margins data to operationalize competitive salience. In the 2016 election, following a campaign event, the underdog candidate saw a 60% increase in merchandise purchase (vs. 38% for the favorite), and similar results were obtained for the 2008 election. Similarly, merchandise sales for the underdog increased when margins in polling were closer (β=.04, *z*=5.67, *p*<.001), while the opposite was true for the favorite.

In sum, we demonstrate that underdog positioning in a competitive political race can increase purchase activism. We extend prior work on drivers of political donations (Ansolabehere et al. 2003; Ensley 2009) by demonstrating how candidate positioning can drive supporters' choice of purchase activism vs. silent monetary donations. This work contributes to emerging research examining intersection of politics and consumer-related behaviors (Crockett and Pendarvis 2017; Jung et al., 2017).

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Do Consumers Expect Values to Increase or Decrease Over Time?

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EXTENDED ABSTRACT

Do we expect a company's profits to be higher or lower next year over this year? Likewise, will companies advertise more next year versus this year? Why? Consider profits. A priori there is no reason to expect profits to increase or decrease next year—some companies do better than others. However, we suggest that consumers' expectations vary systematically—given profits this year, consumers expect profits to be higher next year. This occurs because consumers associate change with increase (rather than with decrease).

Is this normative? Imagine estimating the number of trees cut each year in the rainforest. We suggest that irrespective of framing—negative (number of trees cut) or positive (the number of trees saved), people expect increases next (vs. this) year. This also rules out optimism bias (Weinstein 1980) as an explanation because optimism would lead to a lower estimate in the negative framing condition.

Our theory is related to, yet different from research on trend forecasting. For example, Harvey and Bolger (1996) suggest that consumers expect trends to continue. Relatedly, Thomson and colleagues (2013) find that, people are better at generating forecasts for, and at identifying ascending, rather than descending, trends. However, we make a broader point: even when consumers have only one data point (and not a trend), they expect the next point to be higher.

We build on research on mental metaphors that associate space with both numbers and time to explain this phenomenon. The mental number line (Dahaene, Bossini, and Giraux 1993) supports the notion that numbers increase to the right. Furthermore, the mental time line (Boroditsky 2000) argues that we associate the future to be to our right (Santiago et al. 2007). The explanation for both metaphors is believed to be rooted in how we learn (e.g., count from left to right; Dahaene et al. 1993) and in cultural aspects (time runs from left to right on Western calendars; Bonato, Zorzi, and Umiltà 2012). Thus, we believe that people tend to generate increasing estimates because they naturally expect quantifiable events to increase over time. Taken together, we predict change is associated with increase and demonstrate this in six studies.

In study 1, we demonstrate our basic effect—even when provided with only one data point, people predict increases. We used a 2 timeframe (near vs. far) by 7 replicates design (N=437). Each replicate included a brief introduction and a benchmark value. For example, in the rainforest scenario, we indicated that in 2010, 113,000 square miles of rainforest were cut; we then asked participants to estimate the amount cut in 2012 (near) or in 2015 (far). As predicted, in each replicate, participants expected the estimates to be higher than the benchmark for both near and far conditions. Furthermore, consistent with the belief that change is associated with increases, the estimate was higher in the far (vs. near) condition.

In study 2, using one scenario from study 1 we manipulated frame to be positive or negative (N=107). Participants in the positive (negative) frame read about the number of trees saved (cut) in the rainforest and provided an estimate for next year. Both estimates were higher than the scenario benchmark ($ps < .05$), ruling out optimism as an explanation. To wit, participants estimated in the negative frame that the numbers of trees cut would increase but also estimated

in the positive frame that the number of trees saved would increase, even if it is logically impossible for both to increase.

In study 3, we provide support for our proposed mechanism. According to the mental metaphor account, if people expect numbers to increase in the future, the converse should occur for the past. Using three scenarios from study 1, we asked participants to estimate numbers at a future or a past point in time (N=254). Consistent with our predictions, participants provided higher estimates for the future ($ps < .001$) but lower estimates for the past ($ps < .001$).

Study 4 show evidence of our positive change expectation effect also for negative numbers. This study is important to rule out the possibility that people expect numbers to increase in their absolute magnitude. Participants (N=237) were presented with a scenario about the ROI of a new business unit for a hypothetical paper company. The ROI for this business unit in the previous year was either negative or positive, depending on condition. We asked participants to make their estimates about future ROI. As predicted, participants expected numbers to increase in value (i.e., consistent with number line) and not in absolute magnitude for both negative ($p<.001$) and positive ($p<.01$) ROI.

If the association between change and increase is automatic, then participants should respond faster to changes that relate to increases (vs. decreases). To this end, we measured response latencies in study 5 (N=185). Participants read a scenario and were provided a benchmark value (e.g., number of visits to the ER made this month). Following this value, we presented them with 60 potential future estimates (e.g., ER visit next month). In each case, participants assessed if this estimate was likely to be correct or not. As predicted, participants deemed the change more likely and also responded faster with an increase (vs. a decrease).

Finally, in study 6 (N=151) we show that consumers use the positive change expectation to make judgments about restaurant ratings. Participants demonstrated that they generally expect restaurant ratings to go up, and this effect is moderated by the room for improvement depending on whether the restaurant is new or already established.

Together, we show that changes are associated with increases. Thus, we generalize the research on trends by showing that even when only one data point exists, consumers expect increases (vs. decreases). However, contrary to this research, which suggests that consumers expect both increasing and decreasing trends to continue, when only one value is presented, the estimate is higher. We believe these finding are likely to impact not only numerous marketing contexts (e.g., cost, efficiency, performance expectations) but also provides important insight into how people evaluate numbers.

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It's Not as Bad as I Thought It Would Be: Health Halos and Expectation Disconfirmation Effects on Affective and Cognitive Evaluations of Food Products

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EXTENDED ABSTRACT

Consumers' evaluations of products and services are impacted by both top-down influences such as one's expectations and bottom-up influences such as one's actual experience (Lee, Frederick, and Ariely 2006). Expectations can be formed by extrinsic cues (such as labels) and can impact evaluations by producing either assimilation or contrast. In the food domain, purchase is determined by affective (tastiness) as well as cognitive (healthiness) attributes (Shiv and Nowlis 2004). This paper shows that in the absence of experiential consumption (i.e. tasting), one's evaluations of both affective (tastiness) and cognitive (healthiness) attributes of foods with a label that creates biased evaluations (vegan) are assimilated with one's expectations. However, in the case of actual taste of such foods, the evaluation of the affective attribute (taste) is boosted by being contrasted with expectations. The cognitive attribute (health) still shows assimilation effect even when additional nutritional information is provided. Across four studies, we investigate expectations about tastiness and healthiness of food labeled as vegan (vs. unlabeled) and show that actual tasting of such food results in higher perceived tastiness (via expectation disconfirmation) and healthiness (via health halo) resulting in higher purchase likelihood.

The pilot study (n=119 MTurk workers) and Study 1 (n=92 undergraduate students) aimed to establish the presence of the vegan health halo effect for a variety of food products. In both studies, participants rated different food images labeled as either vegan or not (unlabeled). The pilot study utilized five different foods; two were retained and used in Study 1 (cookie and hot dog). Participants rated each food item on eighteen dimensions. Our primary variables of interest were affective (e.g., taste) and cognitive (e.g., health-related) ratings.

In Study 1, participants expected food labeled as vegan to taste worse than an unlabeled image for both cookies (M_{label}=4.86 vs. $M_{unlabeled}$=6.43, p<.001) and hot dogs (M_{label}=3.02 vs. $M_{unlabeled}$=4.90, p<.001). Likewise, both cookies (M_{label}=3.54 vs. $M_{unlabeled}$=1.95, p<.001) and hot dogs (M_{label}=3.58 vs. $M_{unlabeled}$=2.23, p<.001) labeled as vegan were perceived as healthier than unlabeled food items.

In Studies 2 and 3, we tested whether engaging in actual experience of tasting leads to assimilation with expectations (i.e. vegan-labeled products seen as less tasty), debiasing of expectations (vegan-labeled products seen equally tasty) or contrasting with expectations (i.e. vegan-labeled products seen as more tasty).

To test these possibilities, Studies 2 and 3 utilized an experimental design again manipulating labels (vegan or unlabeled) wherein participants actually tasted and rated food products. Study 2 (n=129) was conducted in a lab with cookie tasting. Study 3 (n=313) was conducted in a busy area at a large public university where participants rated either hot dogs or cookies (all food products were vegan). After tasting, participants rated the food on tastiness, healthiness and purchase likelihood. Study 3 findings replicated and extended the lab findings from Study 2, therefore we report statistics from Study 3 below.

Ratings of cognitive dimensions echoed the findings from the hypothetical evaluation studies. In study 3, participants rated vegan cookies (M_{label}=3.87 vs. $M_{unlabeled}$=3.14, p=.004) and hot dogs (M_{label}=5.01 vs. $M_{unlabeled}$=4.13, p<.001) as healthier than their unla-beled counterparts. However, on affective dimensions participants rated the vegan cookie as tastier compared to the unlabeled cookie (M_{label}=5.62 vs. $M_{unlabeled}$=5.14, p=.011) and hot dogs (M_{label}=5.23 vs. $M_{unlabeled}$=4.13, p<.001), counter to hypothetical perceptions. Further, parallel mediation analysis run in PROCESS provides evidence for the indirect effect of labeling on purchase likelihood through taste evaluations. Although health perceptions are influenced by labeling (in that vegan labeled food is perceived as healthier) the path to purchase likelihood is non-significant.

The prior studies demonstrate that affective attribute evaluations (perceived tastiness) are boosted though contrast effects when the product is experienced. However, in Study 4 we test whether providing additional information (the nutrition facts) about the cognitive attribute of health will cause consumers to assimilate or contrast. The experiment utilized a 2 (labeling: vegan, unlabeled) x 2 (nutrition information: present, absent) experimental design. Participants (n=196 MTurk workers) provided their affective and cognitive evaluations of a cookie as well as purchase likelihood.

There was a main effect of labeling, replicating previous studies demonstrating that vegan labeled food is expected to be less tasty (M_{label}=4.30 vs. $M_{unlabeled}$=5.91; p<.001) and evaluated as more healthy (M_{label}=4.02 vs. $M_{unlabeled}$ = 2.24; p<.001). However, there was a significant interaction between labeling and information on expected taste (p<.05) such that only in the case of vegan-labeled food, providing nutritional information led to an increase in the taste perceptions (M_{Info}=4.72 vs. M_{NoInfo}=3.84; p<.01). There was a similar interaction effect of the label and information on purchase likelihood (p<.01) such that only in the case of vegan-labeled food, providing nutritional information led to an increase in purchase likelihood (M_{Info} = 4.02 vs. M_{NoInfo}=2.84; p<.01). Parallel mediation analysis demonstrates that the negative effect of vegan labeling on taste perceptions is mitigated by providing nutrition information indicating relative unhealthiness (160 calories for one cookie), and therefore increases purchase likelihood for vegan-labeled food. We suggest this is due to the well-documented UTI heuristic that unhealthy food tastes better. A counter-intuitive finding of this study is that though providing unhealthy nutritional information does not mitigate the health halo effect of vegan label, it boosts the perceived tastiness due to UTI, leading to increase in purchase likelihood of the vegan food item.

This research extends the literature on expectation disconfirmation by demonstrating different effects depending on cognitive or affective nature of the dimension and the type of product experience (whether more experiential such as an actual taste test or more informational such as reading the nutritional label). For marketers, this suggests that inducing trial for products where the expectation may be negative (other examples may include gluten-free, green products or even "disgusting" food such as insects). Finally, because we find that purchase likelihood is mediated by taste perceptions, these evaluations are strongly linked to marketing outcomes.

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Differential Effect of Smart Device Recommendation on Consumption Likelihood of Vice and Virtue Products

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EXTENDED ABSTRACT

Smart devices interact with us on a regular basis, learn from our behavior and offer information which is increasingly becoming integral part of our lives (Hoffman and Novak 2017). Properties like interaction and learning, which are inherent human characteristics, enable the consumers to anthropomorphize these smart objects.

Extant research shows that anthropomorphized nonhuman entities are seen as independent agents capable of judgment and intentions (Waytz, Cacioppo and Epley, 20010; Puzakova, Kwak & Rocerto 2013). Building on this literature, we propose that when consumers receive recommendation for vice products from anthropomorphized smart devices, they are able to attribute part of the responsibility of their consumption decision to the anthropomorphized device resulting in an increase in the likelihood of consumption of such vice products.

Study 1 found that participants were more likely to purchase an unhealthy food, i.e., a high-calorie dessert, when they received an out-of-stock alert on their phone from a smart fridge via a text message (smart condition) rather than when they themselves were solely involved in recognizing the need (conventional condition), e.g., looking inside the refrigerator and realizing that they are almost out of dessert (M_{smart} = 5.41 vs. M_{conven} = 3.94, p < .007). Post-hoc contrasts revealed that participants were less likely to purchase the healthy food (i.e., the fruit bowl) (M_{smart} = 7.10 vs. M_{conven} = 8.37) when they received an out-of-stock alert on their phone from a smart fridge via a text message as opposed to when they themselves realized that they were almost out-of-stock by looking inside a conventional refrigerator. A significant moderated mediation supported the underlying mechanism of responsibility attribution (LLCI = 0.6523, ULCI = 2.3790).

Study 2 tested the underlying mechanism by directly testing whether explicitly transferring the agency of the purchase decision from the smart device to the consumer mitigates the effect. The study utilized a 3 (device type: anthropomorphized smart vs. conventional vs. anthropomorphized smart with agency transfer) X 2 (food type: vice vs. virtue) between-subjects design. Participants in the "*Anthropomorphized Smart with Agency Transfer*" condition were reminded that although they received a purchase recommendation from the smart device, it was ultimately *their* decision whether to buy the vice food. Similar to study 1, in the conventional condition, participants recognized the need by looking inside the conventional refrigerator and realizing that they are almost out of dessert. Participants in the other two conditions received an almost out-of-stock of their dessert message alert via text.

At first, a 2 (device type: conventional device vs. anthropomorphized smart with agency transfer) X 2 (food type: vice vs. virtue) between-subjects ANOVA with purchase likelihood as the dependent variable revealed that the interaction between device type and food type was not significant (*F*<1, NS). This indicates that the purchase likelihood did not significantly differ across the *Conventional and Anthropomorphized Smart with Agency Transfer* conditions. Accordingly, we collapsed across these two conditions. Thereafter, a 2 (device type: anthropomorphized smart vs. combined conventional & anthropomorphized smart with agency transfer) X 2 (food type: vice vs. virtue) between-subjects ANOVA with purchase likelihood as dependent variable revealed that the likelihood of purchasing an unhealthy food was significantly higher when participants received the recommendation from a smart device rather than the other two combined conditions (M_{smart} = 4.41 vs. $M_{combined}$ = 3.38; p < 0.05). By contrast, in case of the virtue food, device type did not influence the purchase likelihood (M_{smart} = 7.70 vs. M_{comb} = 8.15, *p* = 0.233). A significant moderated mediation supported the underlying mechanism of responsibility attribution (LLCI = .34, ULCI = 1.68).

The results provide support to our proposed theoretical framework that consumers were able to attribute responsibility of their vice food consumption decision on the smart device, an effect that got mitigated when consumers were reminded that ultimately the consumption decision was solely their responsibility.

Study 3 utilized a 3 (device type: anthropomorphized smart vs. conventional vs. dehumanized anthropomorphized smart) X 2 (food type: vice vs. virtue) between-subjects design. Participants in the *dehumanized anthropomorphized smart* condition were reminded that even though smart devices can perform certain functions similar to humans, ultimately, they are just machines. Supporting our theory, results show that people in the *dehumanized anthropomorphized smart* condition were not able to attribute responsibility to the smart device which in turn lowered the purchase likelihood. Specifically, there was no difference in the purchase likelihood of vice food between the *conventional device* and the *dehumanized anthropomorphized smart device* condition (M_{conven} = 3.12 vs. $M_{dehumanized}$ = 2.79; *p* > .05). Subsequently, those two conditions were collapsed. A 2(device type: smart device vs. combined conventional device and dehumanized device) X 2 (food type: vice vs. virtue) between-subjects ANOVA with purchase likelihood as dependent variable revealed the purchase likelihood of an unhealthy food was significantly higher when participants received the recommendation from a smart device rather than the other two combined conditions (M_{smart} = 3.88 vs. $M_{combined}$ = 2.94; p < 0.01). By contrast, and as expected in case of the virtue product, there was no significant difference in the purchase likelihood of virtue product (M_{smart} = 7.61 vs. M_{comb} = 7.84, *p* = 0.50).

Study 4 replicated the effect in a different smart device (shopping app) and product category (juice). Participants in the *smart* condition learned about a deal for a tasty but unhealthy fruit juice either through a text sent by a smart shopping app installed in their phone. In the *self* condition, participants came to know about the deal by seeing details about the deal in the shop next to the one where they were currently shopping. Replicating the previous results, participants were more likely to buy the tasty but unhealthy juice when they received the information via the smart shopping app (M_{smart} = 4.91 vs. M_{self} = 4.00, *p* < 0.03) versus seeing the deal themselves.

In sum, four studies find that consumers are more likely to purchase vice products when they receive recommendation from anthropomorphized smart devices. The results are consistent with earlier literature on external attribution of responsibility in consumption context (Hagen, Krishna and McFerran, 2013) which shows that consumers often are able to indulge in vice foods when they are able to outsource or attribute the consumption responsibility to an external agent.

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Form Follows Function: How Relationship Motives Impact Preferences for Utilitarian Consumption

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EXTENDED ABSTRACT

While the influence of relationship motives on hedonic consumption has been widely studied, research has been far more limited on when relationship motives may lead to a preference for more utilitarian products. This is particularly important because consumers face the problem of trade-offs between hedonic and utilitarian options and must balance reward-seeking decisions with more practical choices in their daily lives (Kivetz and Simonson 2002; Lu, Liu, and Fang 2016) Furthermore, many of the choices that consumers make are influenced by their potential or current romantic partners.

Extending research from relationship sciences and evolutionary psychology, we propose that individuals with relationship maintenance motive (relative to individuals with a relationship formation motive) will have stronger preferences for utilitarian products. This preference for utilitarian products results from a shift in temporal focus for individuals with a relationship maintenance motive, such that individuals become more future-oriented. Five studies, including secondary data from a national household survey of automobile purchases, support our predictions. Furthermore, we identify boundary conditions to our observed effects, including the nature of the consumption decision (renting vs not) and threat from potential romantic rivals.

Study 1 used publicly available data from the 2017 National Household Travel Survey (NHTS) conducted by the Federal Highway Administration division of the US DOT. We classified households with two individuals who reported as living with their spouse/unmarried partner to have a relationship maintenance motive (46,297 households) and households with a single individual to have a relationship formation motive (35,428 households). Next, using information from the 2014 Auto Brand Perceptions Survey by Consumer Reports, we created a utilitarian perception index for each car brand owned in our sample. The utilitarian index for each car brand was computed by dividing the safety contribution score by design contribution score. Using our utilitarian index, we then created our dependent variable for analysis. To analyze the impact of relationship motives on utilitarian consumption, a regression analysis was performed with relationship motives, household income, urban/rural area, census region, and annual miles estimate as the predictors of utilitarian index. Average utilitarian index and annual miles estimate were log-transformed due to non-normal distributions. The results revealed a significant effect of relationship motives on utilitarian consumption ($\beta = .065$, $t = 12.14$, $p < .001$). This effect suggests that households with a relationship maintenance motive prefer cars that are more utilitarian, in support of our hypothesis.

In Study 2, 236 undergraduate students (63% female, $M_{age} = 22.3$) were randomly assigned to a single-factor (relationship motive: maintenance, formation, or control) between-subjects design. Adapting procedures from Durante et al. (2015), participants then watched a slide show manipulating relationship motives. After the priming task, participants completed a choice task adapted from previous research (Chernev 2004). Participants were asked to choose between two options to go for lunch (Restaurant A within walking distance: utilitarian option or Restaurant B with rich dessert menu: hedonic option). Results of a logistic regression showed that relationship motives predicted the proportion of participants who chose the utilitarian option (Wald $\chi^2(2) = 6.10$, $p = .047$). Specifically, participants with the relationship maintenance motive more frequently chose the restaurant within walking distance (87.3%) relative to participants in the relationship formation condition (66.7%, B = -.97, Wald $\chi^2(1) = 5.71$, $p = .017$) and participants in the control condition (73%, B = -.83, Wald $\chi^2(1) = 3.98$, $p = .046$). Furthermore, the number of participants who chose utilitarian option did not differ between the control condition and relationship formation condition (B = -.14, Wald $\chi^2(1) = .16$, $p = .69$).

In Study 3, 199 individuals (52.8% female, $M_{age} = 32.6$) from Amazon Mturk were randomly assigned to a single-factor (relationship motive: maintenance or formation) between-subjects design. Adapting procedures from Durante and Arsena (2015), participants then read a vignette priming either a relationship maintenance or formation and then completed a writing task. After the priming task, participants completed a money allocation task in six categories (utilitarian options: savings and investment, personal insurance, and home and vehicle maintenance; hedonic options: entertainment, designer apparel, a vacation). Next, to assess the mediating role of temporal focus, participants completed a four-item temporal focus measure from Shipp, Edwards, and Lambert (2009). Results of a mediation analysis using PROCESS Model 4 (Hayes 2013) showed that the indirect effect of relationship motive on utilitarian choice through the temporal focus was significant (Effect = 8.2325, 95% CI [.1665 to 19.7853]). Furthermore, the direct effect of relationship motive on utilitarian consumption became non-significant when temporal focus was included in the model (Effect = 43.7159, 95% CI [-2.5567 to 89.9884]).

Study 4 manipulated the temporal focus of individuals through a decision task involving an act that has strong association with temporal trade-offs: renting. Results showed that when students (N=134, 58.2% female, $M_{age} = 21.8$) were asked to evaluate the importance of attributes for a bicycle, attribute preferences for utilitarian attributes were significantly higher when relationship maintenance (M = 5.88) relative to relationship formation (M = 5.06, 95% CI [.02, 1.61], $p = .044$) was salient. However, for a rental bicycle, no significant differences were observed for utilitarian attribute preferences between the relationship maintenance (M = 4.91) and formation (M = 5.25, 95% CI [-1.09, .42], $p = .38$) conditions. Additionally, in relationship maintenance motive, preferences for the utilitarian attributes were lower in the rental product condition relative to the control product condition (95% CI [-1.73, -.20], $p = .014$).

Study 5 introduced the boundary condition of relationship threat, such that when threat was absent, individuals (214 undergraduate students; 54.7% female, $M_{age} = 21.3$) with relationship maintenance motive (M = 4.33) preferred the utilitarian attribute relative to participants with relationship formation motive (M = 3.55, 95% CI [.05, 1.51], $p = .037$). However, for participants experiencing relationship threat, attribute preferences for shoes were not significantly different across the maintenance (M = 3.60) and formation (M = 3.93, 95% CI [-1.03, .37], $p = .36$) conditions. Additionally, in relationship maintenance motive, individuals had enhanced preferences towards the utilitarian attribute in the no threat condition relative to the threat condition (95% CI [.011, 1.44], $p = .047$).

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Pride & Prejudice: How an Individual's Hubris Makes Them Say Bad Things About Your Brand

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EXTENDED ABSTRACT

Purpose

Consumer word-of-mouth (WOM) is an important driver of economic activity and accounts for over $6 trillion in global consumer spending each year (Cardona, 2015). However, negative WOM can be a significant issue for companies, since consumers are twice as likely to spread negative WOM as they are to spread positive WOM (Anderson, 1998; Chevalier & Mayzlin, 2006). This is even more relevant in service settings such as restaurants, hotels, and airlines, where the complexity of services and delivery processes mean there are many opportunities for a service failure to occur (Boston Consulting Group, 2013). Much research on the antecedents and drivers of negative WOM have mostly focused on examining how a firm's negative performance can give rise to negative emotional reactions, thus leading to negative WOM (Kalamas, Laroche, & Makdessian, 2008; Soscia, 2007; Wetzer, Zeelenberg, & Pieters, 2007). However, it remains unclear whether contextual factors that seem to be *unrelated* to a firm's negative performance might further influence negative WOM.

This is particularly important when we consider the fact that firms regularly evoke positive emotions in their advertising and marketing campaigns (Cavanaugh, Bettman, & Luce, 2015; Septianto & Pratiwi, 2016). This present research seeks to investigate whether positive emotions experienced by consumers, while unrelated to a firm's negative performance, can further influence negative WOM. Theoretically, this is also significant because it involves how emotions unrelated to a firm's negative performance (i.e., incidental emotions) might further affect consumer intentions to spread negative WOM. This is controlling for the fact that consumers' negative WOM is influenced by negative emotions arising from that negative experience (i.e., integral emotions).

Design/Methodology

We test our predictions across six experimental studies. Study 1 aims to test Hypothesis 1a using dispositional emotions. Studies 2a and 2b extend the findings of Study 1 by directly manipulating emotion states to establish the causal relationship between emotion and intentions to engage in negative WOM. Studies 1 and 2a use the context of a service failure in a hotel, whereas Study 2b examines a context in which participants recall their own experience to provide convergent evidence and increase confidence on our findings. Study 3 further examines the underlying mechanism driving the emotion effects using the 'moderation-of-process' approach. Studies 3 and 4 also explore a different service failure case in a restaurant to increase the robustness of the results. Finally, Study 4 investigates the boundary condition and examines the moderating role of different promotion types (H2a and H2b).

Study 1 (N = 206) employed a one-factor, three-level (dispositional emotion: hubristic pride, authentic pride, happiness) within-subjects design. Specifically, we examine the association between dispositional emotions and intentions to engage in negative WOM. We conducted a regression analysis using hubristic pride, authentic pride, and happiness to predict intentions to engage in NWOM. We also controlled for the negative affect in the model. Results revealed that increasing dispositional hubristic pride was associated with increasing intentions to engage in negative WOM.

Study 2a (N = 189) employed a one-factor, four-level (emotion: hubristic pride, authentic pride, happiness, neutral) between-subjects design. Results revealed that participants in the hubristic pride condition had higher intentions to engage in negative WOM, as compared to those in authentic pride, happiness, and neutral conditions supporting Hypothesis 1a. We then conducted a series of mediation analyses using PROCESS Model 4 with 10,000 resamples (Hayes, 2017). Results revealed significant indirect effects of hubristic pride (as compared to happiness, authentic pride, and neutral conditions) via psychological entitlement, supporting Hypothesis 1b. Study 2b (N = 201) found that participants in the hubristic pride condition had higher intentions to engage in NWOM, as compared to those in authentic pride, happiness, and neutral conditions. We also replicated the indirect effects via psychological entitlement.

Study 3 (N = 184) employed a 2 (emotion: hubristic pride, neutral) × 2 (entitlement: heightened, control) between-subjects design. We expected that the emotion effects should be attenuated in the heightened entitlement condition. Results showed that in the control condition, participants in hubristic pride condition had higher intentions to engage in negative WOM than did those in the neutral condition. However, these differences were non-significant in the manipulated entitlement condition.

Study 4 (N = 400) employed a 4 (emotion: hubristic pride, authentic pride, happiness, neutral) × 2 (promotion: discount, donation) between-subjects design. We found that in the discount-promotion condition, participants in the hubristic pride condition had higher intentions to engage in negative WOM, as compared to those in authentic pride, happiness, and neutral conditions. However, these differences across emotion conditions were non-significant in the donation-promotion condition. Moderated mediation analysis also provided support for Hypothesis 2b. We also replicated these findings using different stimuli. This additional study (N = 239) employed a 2 (emotion: hubristic pride, neutral) × 2 (promotion: discount, donation) between-subjects design.

Findings, originality and contribution

The present research makes several important implications, theoretically and managerially. First, this research contributes to the emotion and WOM literature by demonstrating how incidental emotions that are unrelated to a firm's negative performance can influence negative WOM following a service failure. Second, it establishes the underlying process driving the effect of hubristic pride – psychological entitlement – and test a boundary condition of the emotion effects. That is, when consumers' attention is directed to helping other people, the hubristic pride effect is attenuated. Managerially, these findings are beneficial for firms and service providers to understand how to minimize the potential backlash of using positive emotions in their marketing communications, especially when service failures occur.

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When and Why People Prefer Markets Versus Lotteries

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EXTENDED ABSTRACT

How should scarce goods and services be allocated? On the one hand, people often subscribe to an equality norm—everyone should be given an equal share, or an equal chance to acquire things (Deutsch 1975; Savage and Torgler 2010). Lotteries, for example, reflect an equality norm. On the other hand, people also often subscribe to a preference norm—things should be allocated to those who have the strongest want or need for them. Markets reflect a preference norm, in which willingness to pay (WTP) is assumed to signal preferences. Given these competing norms, when might people prefer to use markets versus lotteries?

Some argue that these beliefs stem from broader ethical principles or societal goals (Deutsch 1975). For example, if a society cares about mutual respect and agreeable social relationships, then it will endorse the equality norm (and hence, lotteries). But in this research, we propose that people are not so dogmatic. Instead, they take a more pragmatic approach, endorsing the allocation system they think best fits the structure of preferences among a group of people.

Specifically, we suggest people consider how much *preference variance* there is within a group. If all members of a group have similar preferences, then people will endorse lotteries. But if members of a group have different preferences, then people will endorse markets.

This is because people want markets to sort people based on their preferences, such that higher WTP is associated (albeit imperfectly) with greater want or need (Shaddy and Shah 2018; Sunstein 2007; Warren, McGraw, and Van Boven 2011). But when everyone wants or needs something to a similar degree, there is less "signal" to detect; WTP and preferences are no longer correlated. Thus, we argue that when preference variance is low, people will perceive markets as unfair, endorsing lotteries instead. We tested this theory across six studies (N=2,810), finding that people endorse the use of a market when preferences and WTP vary (preferring a lottery otherwise), that this relationship extends to real-world products and services, and that the desire to achieve allocative efficiency (i.e., make sure those with the strongest preferences get things) plays a mediating role.

In Study 1 ($N = 525$), we described a scenario in which tickets to a popular event or supplies of a popular product were limited, and several people maintained either the same level or different levels of excitement or interest in the event or product. We then asked participants if the last item should be allocated either to the person willing to pay the most money (i.e., use a market) or randomly. As predicted, endorsement of a market was higher in the variance condition (47%) than in the control condition (31%; $\chi^2(1) = 13.84$, $p < .001$).

In Study 2A ($N = 402$), we used WTP as a proxy for preferences, predicting that participants would infer variance in preferences from variance in WTP. We described a scenario in which students were interested in acquiring the last ticket to a basketball game. These students offered either different amounts of money ($310–$402) or similar amounts of money ($354–$358). We asked participants whether the ticket office should sell the last ticket to the student willing to pay the most (i.e., use a market) or to a randomly selected student. As predicted, endorsement of a market was higher in the variance condition (66%) than in the control condition (53%; $\chi^2(1) = 6.96$, $p = .008$). In Study 2B ($N = 586$), we replicated this result with a different combination of WTPs. Endorsement of a market was again higher in the variance condition (61%) than in the control condition (49%; $\chi^2(1) = 8.39$, $p = .004$).

We next designed Study 3 ($N = 200$) to test the relationship between preference variance and endorsement of a market with real-world products and services. We described 25 items that are often in short supply (e.g., Uber rides, hotel rooms, gasoline, concert tickets, etc.). We asked participants to rate their perceived preference variance for each item (i.e., their beliefs about how much demand varies for it). We also asked participants to determine whether, if each item were in short supply, it should be allocated via a market (based on WTP) or a lottery. Across the 25 items, the group-level correlation between endorsement of a market and beliefs about preference variance was positive ($r = .86$, $p < .001$), as was the individual-level relationship ($B = .42$, $z = 21.61$, $p < .001$). This further suggests, for real-world products and services, that people endorse markets when they believe preference variance is high, but they endorse lotteries when they believe preference variance is low.

One implication of our theory is that holding constant a particular item to be allocated, endorsement of a market may shift, depending on which subset people pay attention to (e.g., a group with high vs. low preference variance). In Study 4 ($N = 405$), we explained that a band was playing a one-night-only show. We manipulated whether tickets were available to the general public—a group with high preference variance—or members of a fan club—a group with low preference variance (i.e., presumably, all members of a fan club would be interested in acquiring tickets). We then asked participants if tickets should be allocated to those willing to pay the most (i.e., use a market) or via a lottery. As predicted, endorsement of a market was higher in the general public condition ($M = 3.66$, $SD = 2.25$) than in the fan club condition ($M = 2.43$, $SD = 1.93$; $t(403) = 5.88$, $p < .001$). Participants further indicated that they believed preference variance was higher in the general public condition ($M = 5.97$, $SD = 1.53$) than in the fan club condition ($M = 3.58$, $SD = 2.12$; $t(403) = 13.00$, $p < .001$).

Finally, we designed Study 5 ($N = 692$) to test whether endorsement of a market is driven by the belief that it will achieve allocative efficiency (i.e., make sure those with the strongest preferences get things) when preference variance is high. We told participants that a craft brewery had just released a limited-edition beer and manipulated whether all or just some fans of the brewery liked that particular type of beer. We then asked participants if the brewery should offer available cases either to the people willing to pay the most (i.e., use a market) or randomly. We also measured beliefs about allocative efficiency: "Which policy does a better job making sure that the people who want the available cases the most are the ones who will get them?" Participants more strongly endorsed the use of a market in the variance condition ($M = 4.04$, $SD = 2.19$) than in the control condition ($M = 2.82$, $SD = 2.12$; $t(690) = 7.45$, $p < .001$). Participants also thought that the market would do a better job achieving allocative efficiency in the variance condition ($M = 5.28$, $SD = 1.92$) than in the control condition (M = 4.44, SD = 2.32; $t(690) = 5.20$, $p < .001$). Consistent with our theoretical account, these beliefs about allocative efficiency mediated the effect of variance condition on endorsement of a market (indirect effect = .37, $SE = .07$, bias-corrected 95% confidence interval = [.225, .515]).

This work has a potentially striking implication. People often disagree about when markets are appropriate. And it can seem like these disagreements stem from different moral convictions or political philosophies (e.g., socialist versus capitalist views). But our re-

search suggests a surprising malleability: People survey the nature of preferences within a group and choose an allocation system to fit it.

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When and Why Communicator Positivity Affects Online Followership:
The Diverging Effects of Likeability Versus Credibility

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EXTENDED ABSTRACT

Self-enhancement motives are ubiquitous in consumer interactions and online communication (Berger 2014; Hennig-Thurau et al. 2004). Many consumers seek to attract followers and expand their social reach, more so than ever before. Research on influencers and content generators has informed us about the strategies that online communicators employ in order to enhance their prestige (Berger 2014; De Angelis, Bonezzi, Peluso, Rucker, and Costabile, 2012; Toubia and Stephen, 2013). In particular, communicators motivated by self-enhancement prefer to generate positive content (Barasch and Berger 2014; Chen 2017; De Angelis et al. 2012; Dubois, Bonezzi, and De Angelis 2016). The communicator's rationale is that receivers like positive communicators (Folkes and Sears 1977; Kamins, Folkes, and Perner 1997), and presumably they will find positive communicators more appealing. Whether positivity is indeed effective in enhancing communicator appeal is the focus of this research. Are receivers more inclined to follow positive communicators online? We argue that the answer to these questions is more complex than communicators may realize.

Online followership is an indicator of potential clout. As such, it guides firms' choice of influencers and shapes marketing performance. Thus, understanding why consumers follow communicators online is an important, yet under-researched, area. We refer to *online following* as the consumer's decision to follow a communicator and see their future content in one's feed. Following can be a means to obtain ongoing information from, and signal social affiliation with, the communicator (Ouwerkerk and Johnson 2016). Accordingly, following should hinge on the communicator's likeability and credibility, and their interplay. In this research, we examine how a communicator's aggregate sentiment affects perceived likeability and credibility, and the implications this has for the receiver's decision to follow the communicator.

Aggregate sentiment refers to the valence of a communicator's body of work on a platform (e.g., average rating, distribution of ratings given). Since following is an enduring link with the communicator, receivers base their decision to follow on multiple posts, rather than on a discrete message. In a pilot study, participants reported that on average, they base their decision to follow on more than six posts by the communicator. Discrete and ongoing sentiment can also lead to diverging perceptions of the communicator: a single positive message does not necessarily undermine credibility (Schlosser 2011) but constant, ongoing positivity could.

In line with previous findings (Folkes and Sears 1977), we hypothesize that communicator likeability increases with aggregate, ongoing positivity (H1a), but perceived credibility does not. Research on two-sided persuasion suggests that balancing positive and negative content can enhance the perceived credibility of the message and the communicator (Crowley and Hoyer 1994; Schlosser 2011). There is reason to believe that this will be especially true at the aggregate level: First, consistently posting positive content may come across as excessive, and being too positive can make people seem naïve and uninformed (Barasch, Levine, and Schweitzer 2016). In addition, communicators who are unfailingly positive or negative could come across as biased (Luca and Zervas 2016), raising suspicion about their mo-

tives. Thus, neutral communicators, who balance between positive and negative content, should be seen as most credible (H1b).

Based on this analysis, we expect negative communicators to come across as neither likable nor credible, and they should therefore elicit the least interest among potential followers (H2). Decisions to follow neutral and positive communicators are less straightforward, and depend on the relative importance of perceived credibility and likability. All else equal, ongoing positivity should enhance likability but undermine credibility, so we expect neutrality and positivity to be associated with similar levels of intent to follow. Positivity should facilitate following when credibility is less consequential to the receiver (H3), allowing likability to exert a stronger effect. This may occur when (a) credibility is held constant, (b) the receiver is impulsive, uncritical, and unlikely to scrutinize available information prior to acting or making decisions, and (c) the product category is associated with lower credence attributes (e.g. restaurants vs. health services). In sum, communicators' preference to generate positive content (e.g., De Angelis et al. 2012), while beneficial in some contexts, can also undermine perceived credibility and compromise followership if used unwisely.

To enhance the relevance and practical implications of our investigation, we focus on online review platforms. Online reviews affect consumer decision-making and product sales, and are highly relevant for marketing researchers and practitioners (Babić Rosario, Sotgiu, De Valck, and Bijmolt 2016; Chevalier and Mayzlin 2006). Communicators who are able to attract followers could therefore be especially effective on such channels. Accordingly, online review platforms now include social media features such as following, and have become a growing influencer channel (Yelp 2018; Reader 2018). Furthermore, prominent online review platforms such as Tripadvisor, Yelp, and Goodreads present information about the aggregate sentiment of reviewers' content. This allows consumers to easily access and utilize information about aggregate reviewer sentiment while forming an impression of a focal reviewer and deciding whether to follow them. Together, these features of online review platforms make them an ideal setting to examine how consumers react to the ongoing sentiment of communicators.

We conducted three experiments and analyzed a large-scale dataset from an online review website to test how aggregate sentiment shapes the receiver's perception of the communicator and the decision to become a follower.

In the studies, we manipulated *ongoing communicator valence* within-subjects, by displaying the distribution and average of the star ratings given by each of six communicators, alongside their profile pictures and names. The ratings that these communicators supposedly gave to products were either mostly positive, neutral, or mostly negative, with two reviewers representing each valence level. The primary dependent measure was intent to follow the communicator on the review website. We also examined the perception of our focal communicator characteristics: likability, as well as two components of credibility: trustworthiness and knowledgeability (Kelman and Hovland 1953; Petty and Brinol 2010).

Study 1a ($N = 100$ online panelists) tested the effect of valence on perceived communicator likability and credibility, and the effect of each perceived communicator characteristic on intent to follow (1 =

low, 7 = high). The communicators were presented as hotel reviewers on a travel review website. We ran a mixed effects regression model with intent to follow as dependent variable and aggregate sentiment as a predictor variable (with neutral sentiment coded as reference level). Consistent with H2, compared to neutral sentiment, negative sentiment diminished intent to follow (B = -0.694, $t(488)$ = -5.855, $p <$ .001). Positive sentiment resulted in similar intent to follow as did neutral sentiment (B = -.036, $t(488)$ = -.301, p = .763). Next, to assess the effect of aggregate sentiment on perceived communicator-likability, we ran a mixed effect regression model with perceived likability as the dependent variable, aggregate sentiment as a within Ss predictor (negative, neutral, positive) and perceived communicator-credibility as a covariate. Consistent with H1a, compared to aggregate neutral sentiment, positive sentiment increased communicator likability (B = .447, $t(487)$ = 5.678, $p < $ .001) and negative sentiment decreased it (B = -.196, $t(487)$ = -2.412, $p < $ .016). To assess the effect of aggregate valence on perceived communicator credibility, we ran a similar model with perceived communicator credibility as the dependent variable, aggregate sentiment as a within Ss predictor (negative, neutral, positive), and perceived likability as a covariate. Consistent with H1b, credibility was highest for neutral communicators, compared to both positive communicators (B = -.416, $t(487)$ = -5.154, $p < $ .001) and negative communicators (B = -.262, $t(487)$ = -3.182, p = .002). Finally, regressing communicator likability and communicator credibility on intent to follow revealed that each had a significant effect on intent to follow (B = .786, $t(489)$ = 19.906; B = .965, $t(489)$ = 29.272; p's < .001, for likability and credibility, respectively).

Study 1a provides preliminary support for hypotheses 1 and 2. However, because we measured following jointly with perceived communicator characteristics, one may argue that participants assumed that these characteristics are important considerations in the decision to follow. Would participants show the same preference for following if their decision was spontaneous, i.e. separate from questions about communicator likability and credibility?

To that end, study 1b (N = 197) employed the same stimulus, i.e. reviewer profiles, as study 1a, but manipulated judgment type between subjects. To generalize the findings to another domain, we presented the communicators as book reviewers. Based on reviewer information, each participant made one of four judgments: how likely they are to follow each reviewer (1 = unlikely, 7 = likely), how truthful, how knowledgeable in books, and how likable (1 = not at all, 7 = very) each reviewer is. To assess the effect of aggregate communicator sentiment on each judgment, we ran a series of repeated measure ANOVAs (aggregate sentiment: negative, neutral, positive). Supporting H2, participants reported lower intent to follow a negative than a neutral communicator (Z = -5.249, $p < $ .001), with no significant difference between neutral and positive communicators (Z = 1.312, p = .568). Consistent with H1a, participants found positive communicators more likable than neutral communicators (Z = 2.86, p = .013), and neutral communicators more likable than negative communicators (Z = 6.247, $p < $ .001). Finally, participants perceived the neutral communicators as more truthful than both negative (Z = 3.998, p < .001) and positive communicators (Z = -8.382, p < .001); ANOVA on perceived communicator knowledgeability revealed a similar pattern, again supporting H1b.

Study 2 (N = 111 online panelists) tested the prediction that communicator positivity enhances intent to follow when credibility is held constant across communicators. We utilized the same repeated measures paradigm, but also manipulated perceptions of communicator credibility. Communicators were either shown with no additional information (control) or with an indication that they were "expert reviewers", signaling that they are knowledgeable and trustworthy

sources of information. We conducted a 2 (expertise: control vs. expert; between Ss) X 3 (communicator valence: negative, neutral, positive, with 2 replicates in each sentiment level; within Ss) mixed ANOVA model on intent to follow. Supporting H3, communicator expertise interacted with communicator's ongoing valence ($F(2, 218)$ = 5.528, p = .005). The control condition yielded the same effects of communicator sentiment on intent to follow as in study 1. Participants reported lower intent to follow a negative than a neutral communicator (Z = 5.971, $p < $ .001; M_{neg} = 3.172, M_{neut} = 4.114), with no significant difference between neutral and positive communicators (Z = -2.007, p = .113; M_{pos} = 3.787). However, when the same reviewers appeared with an expert tag, reviewer sentiment had a monotonic positive effect on intent to follow. Participants reported greater intent to follow neutral than negative reviewers (Z = 5.233, $p < $ .001; M_{neg} = 3.320, M_{neut} = 4.340), but also greater intent to follow positive reviewers compared to neutral reviewers (Z = 3.181, p = .004; M_{pos} = 4.960).

Study 3 (N = 201 online panelists) tested the moderating role of behavioral activation system (BAS) sensitivity (Carver and White 1994). High BAS sensitivity is associated with impulsivity (Gray 1981), extraversion and sociability (Ashton, Lee, and Paunonen 2002) and also with assigning less importance to credibility and more to likability (Carver and White 1994). Consequently, we expect that those with high BAS sensitivity will prefer to follow positive communicators. Conversely, we expect that those with low BAS sensitivity will find credibility and likability equally important, and should therefore exhibit no particular preference for positive over neutral communicators. The BAS sensitivity scale (Carver and White 1994) includes 13 items, e.g. "I often act on the spur of the moment."

Consistent with H3, a mixed effects regression model revealed a significant moderation between BAS sensitivity and communicator positivity (B = .226, $t(996)$ = 2.689, $p < $ .01), as well as between BAS sensitivity and communicator negativity (B = -.185, $t(996)$ = -2.192, p = .029). Intent to follow monotonically increased with sentiment among participants high in BAS sensitivity (M_{neg} = 3.43, M_{neut} = 4.58, M_{pos} = 4.99), but not among those low in BAS sensitivity. For the latter, communicator positivity did not enhance following intent beyond neutrality (M_{neg} = 3.70, M_{neut} = 4.50, M_{pos} = 4.52). Thus, study 3 supports the hypothesis that receivers who assign less weight to credibility, like those with high BAS sensitivity, are more prone to the effect of likability when deciding whether to follow a positive communicator (H3).

Finally, we examined the moderating role of product category in a large dataset from a popular online review platform, comprising reviews of thousands of businesses in a variety of product and service categories. We pretested the importance that online participants assign to reviewer expertise in each category. With the review dataset, we regressed the log number of followers of a reviewer on the average valance of that reviewer's ratings, the classification (low/high expertise importance) of the category in which she was most active, and their interaction, as well as several of control variables (total number of reviews, length of time being registered on the website, and other controls). As expected, more positive communicators had a larger follower base (β = .10, $p < $ .001). Importantly, and consistent with H3, the above relationship was moderated by the classification of the business category in which reviewers were most active (β = -.01, $p < $ .001). Followership of communicators who mostly review in categories with high credence attributes (e.g., health, automotive services), where the communicator's expertise is most valued, was *less* affected by ongoing communicator sentiment than that of communicators who mostly in review categories with low credence attributes (like restaurants and nightlife).

Taken together, the results of four experiments and of an analysis of review website dataset support our hypotheses, and indicate that on-

going communicator sentiment has diverging effects on credibility and likability: credibility reaches its highest level when communicators are neutral, while likability has a positive and monotonic relationship with communicator positivity. We also demonstrate when communicator credibility vs. likability exert a greater effect on followership preferences. These findings contribute to the theoretical understanding of WOM and its effects by focusing on a novel and important outcome – intended and actual online following– as well as by examining the impact of aggregate rather than discrete WOM messages on perceptions of the communicator.

The insights derived from this research can help marketers work more effectively with online influencers, and can also aid communicators in crafting content that will be valued by potential followers. Our research suggests that communicators' preference to generate positive content (De Angelis et al. 2012), while beneficial in some contexts, can also reduce perceived credibility and followership if used unwisely. In the context of online reviews, diminished credibility undermines consumer welfare, defeats the primary purpose of the review platforms, and is counterproductive for businesses (Banerjee, Bhattacharyya, and Bose 2017). Researchers and practitioners alike should be aware that sometimes one can attract more followers with honey – while in other cases, it is best to mix in some vinegar.

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Will Using a Pink Product Make Males Become Risk Averse?
The Effect of Taking a User's Perspective on Self-Evaluation

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EXTENDED ABSTRACT

Consumers are often exposed to a wide range of products when they go shopping. Although most products are used by everyone, some products may be typically chosen or used by a specific group of consumers. Take color as an example. Although a blue product is chosen by everyone, a pink colored product is typically chosen by female consumers. In this research, we are interested in a related question: if a product feature is typically used by a specific group of consumers, will the use of this feature by a different group change the latter's self-evaluation and make them behave more similarly to the former group?

Drawing from previous literature on perspective taking, self-evaluation, and gender risk-taking, we propose that when consumers use a product that they mentally associate with another group, they might take the perspective of the group of people who typically use such a product. As a result, consumers will perceive themselves to share common elements with this group of typical users (David et al. 1996; Galinsky and Moskowitz 2000). This higher perception of self-other overlap can influence people's self-evaluation and make them behave similarly to others. Thus, if a male consumer happens to use a pink pen to write words on a piece of paper, he might take the perspective of a typical user (a female consumer). This perspective-taking might make a male feel that he has more in common with a female, resulting in him behaving more similar to a female. It has been widely shown that females are more risk-averse than males (e.g. Byrnes, Miller and Schafer 1999). Thus, we propose that: *A male consumer might become more risk-averse while making financial decisions after using a product typically used by females, and typically not used by males, than he might otherwise be.*

Our pilot study and pretest tested two assumptions: 1) *females are perceived as more risk aversive than males* by showing that people predict males are more likely to play gamble than females; and 2) *pink is perceived as a feminine color* by showing that people more likely to indicate the pen is typically used by female if it is in pink shell than in black shell.

Experiment 1 tested the proposed effect through a 2 (gender: male vs. female) by 2 (pen shell: pink vs. black) between-subjects design ($N = 227$). Male participants were less likely to choose a risky option if they were using a pink (vs. black) pen, whereas this effect was mitigated for females. To test whether it is because they consider themselves to have more feminine traits, we asked participants to rate their masculinity and femininity traits, and created a femininity index by subtraction. This femininity index significantly mediated the interaction effect on risk behavior, and the indirect effect is only significant for males.

Experiment 2 ruled out an alternative explanation of a sense of ownership (Weiss and Johar 2016). It was a 2 (gender: male vs. female) by 2 (folder color: pink vs. blue) by 3 (experience: seeing vs. using vs. owning) design ($N = 596$). The proposed effect replicated only when participants were using a folder but not seeing nor owning one.

Experiment 3 showed the mediation role of perspective taking and ruled out for novelty as a plausible explanation. It was a three conditions (pen shell: pink vs. green vs. black) design (males only, $N = 164$). Green was pretested to be equally novel for males as pink but not that associated with females. We measured their perspective taking of a female user. Results showed that people who used a black pen showed a higher preference for riskier lottery compared to those used a pink pen, but not to a green pen. The mediation analysis of perspective taking on risk preference is also significant. These results provide good evidence for the role of perspective taking in mediating the effect of product color on risk preference, and the effect is not due to novelty.

Experiment 4 tested the hypothesized sequential mediating role of perspective taking and self-evaluation simultaneously. It was a two condition (product color: pink vs. blue) between-subjects design (males only, $N = 190$). The results showed that male participants who imagined using a pink product were less likely to take financial risk than those imagined using a blue product. More importantly, consistent with our theorization, the effect is mediated by male participants' perspective taking of a female and their self-evaluation sequentially. The findings in this experiment provided good support for the entire process by which product color affects risk preference.

Our research contributes to three areas of literature. First, we examined when and how a product from an unassociated group would influence consumers' self-evaluation and their subsequent behavior. Second, we found that consumers would take the perspective of the typical users only through using, either actual or imagined. Third, by using a pink product, we found that males become more risk averse but females did not show such a change.

Our findings have important marketing implications, especially in financial and investment products. Marketers should pay attention to objects used by consumers in the decision process. For example, changing the cursor color to pink on a web page may let males have higher empathy (a feminine trait) and help fundraisers to collect more donations.

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The Power of The Body in Social Media:
Analyzing Digital Fitness Influencers as Product Endorsers

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EXTENDED ABSTRACT

New actors have emerged with the booming of social media. Among them, we highlighted the digital influencers, people who have millions of online followers and induce them in favor or against products and brands to be consumed (Araujo, Neijens, and Vliegenhart 2016; Roth and Zawadzki 2018). Digital influencers represent new possibilities for brand endorsement, bringing different configurations about traditional communication strategies in terms of speed, reach, information flow, and engagement.

For this reason, we aimed to analyze the endorsement process of brands and products carried out by digital influencers in their online profiles, having as a research field the fitness market. This market encourages people "to evaluate and work on their bodies in the context of consumer fitness culture - in commercial health clubs and the fitness media, and through personal fitness services" (Maguire 2008, p. 3). The role of digital influencers in this scenario is to show muscular, fitted, and athletic bodies, capable of performing seemingly impossible physical activities. They are "avatars of brand value" to communicate products and services (Powers and Greenwell 2016, p. 529) creating an ideal body image by just posting videos and pictures in social media (Belinska 2018). Thus, we investigated the following question: is there a standardized path for the digital fitness influencers to endorse products and brands in their online profiles?

Subjects of our research were digital influencers who have profiles on Instagram, attending the following criteria: a) has a fitness lifestyle, b) has more than 1 million of followers on Instagram, and c) advertises goods and services on his/her profile. These two last criteria are related to the idea of digital influencer, that requires a considered number of followers reaffirming her or his popularity (Veirman, Cauberghe, and Hudders, 2017), and the role of this influencer as a brand endorser. Lastly, the choice for fitness style was due to the importance of the image required by this lifestyle that makes the body a constant temple of investments. In addition to these criteria, it was sought to analyze influencers who have the same nationality and gender, in order to observe possible similarities in the endorsed products, in the forms of communication and in the public that follows the influencer. Thus, three Brazilian female digital influencers considered fitness models were selected for this qualitative research; they are Juliana Salimeni (thirteen million and five hundred thousand followers), Gabriela Publiesi (three million nine hundred thousand followers) and Alice Matos (one million eight hundred thousand followers). The posts made by Juliana, Gabriela, and Alice during a month (October 1st to November 1st, 2018) that involved the announcement of brands and products (a total of 63) were analyzed using the Semiotic image analysis (Penn 2000). Following the guidelines described by Penn (2000), a dissection of the images followed by their articulations or reconstructions was performed. The steps were identification and cataloging of material elements (denotative inventory) and analysis of higher significance levels, starting with a connotative understanding of what was described in the previous phase.

Our findings provide support for the definition of posting patterns that increase the effectiveness of online endorsement, enabling a framework on how to successively promote brands on social media using social influencers. In general, the posts expose the body and its meanings through flashy photographs and spontaneous texts, transferring these symbolisms to the goods and services announced, bringing to the products characteristics of an extended self, term developed by Belk (1988, 2014) to treat the extension of the subjects on the goods and services owned or used by people. For this, the posts indicate a close relationship between product and influencer, which is not limited to its endorsement, but its use, giving credibility to the message communicated. Through the posts, the influencers also seek interaction with their audience, bringing them closer to the message so that they feel active in building opinions about the post and, consequently, about the propagated product. In the mental map, we demonstrate these elements that form the way of products endorsement by digital fitness influencers on Instagram.

The role of the body in the process of attraction to the message was evidenced, especially by having as subjects of analysis women who adopt a fitness lifestyle. The photographs posted by the influencers that obtained high levels of interaction were those in which their bodies were shown in bikinis, lingerie, and tight clothing. These women have millions of followers in their profiles on Instagram precisely because of the body they have seen as a source of inspiration for many of their audience. The posts that highlight the corporeal are, therefore, the most liked and commented to people who accompany them virtually, reinforcing the need to care for the body (Maguire 2002), to strive to transform it (Scott, Cayla and Cova 2017), to convey from it meanings like beauty, health, sensuality and success (Goellner 2008). Therefore, this body exposed in the photograph involves a sexual appeal but also reaffirms a lifestyle that should inspire followers to seek bodily transformation through consumption practices.

The way how the product is endorsed in the postings also impacted the level of interaction. Exposed goods without the presence of the influencer or exposed in photographs where the endorser is not prominent are not as effective as the postings that bring the digital influencer on leading role by exposing and/or using the product, confirming the premise that the digital endorser, especially her/his body, acts as an avatar of brand value (Powers and Greenwell 2016). Also, many of the texts in the posts of the influencers brought some emotional element of the endorser about the announced good or service, besides the tips of how to use and acquire it, and the benefits generated by its use. This strategy can help the communicated message to be viewed with greater confidence by the followers (Lim, Radzol, Cheah, and Wong 2017) because in describing feelings such as love, happiness, desire and dependence on products, endorsers convey the idea that they use them.

It is also important to consider some ways to generate interaction with followers from the posts made. All digital fitness influencers sought to use messages that led to some interaction with the audience, making the post more attractive, receiving almost immediate response times (Power 2014) of the audience. Questions, motivational phrases, product instructions, invitations, and promotional coupons, and sweepstakes were the strategies used. The latter, in particular, had high acceptance and interaction of the influencers for the benefits generated. We concluded that the closer the endorsement reflects the digital endorsers and their characteristics, the better the acceptability and the communicative efficiency of it.

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Makeup Who You Are:
Self-Expression Enhances the Authenticity of Beauty Work

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EXTENDED ABSTRACT

Consumers spend time and money on their appearance; however, prior work has found that consumers who engage in beauty work can be perceived as inauthentic (Samper, Yang, and Daniels 2017). Drawing on theoretical work distinguishing two conceptualizations of authenticity: essentialist (the true self is natural and innate; Gelman 2003; Newman and Dhar 2014) versus existentialist (the true self is in one's choices; Arnould and Price 2000; Heidegger 1927/1996; Wang 1999), we propose that framing beauty work as self-expression enhances authenticity and product evaluations. We find people assume that consumers engage in beauty work to enhance their appearance, consistent with viewing the true self in essentialist terms. However, self-expression implicitly frames the true self in existentialist terms, leading the chosen (vs. natural) appearance to be seen as more authentic. Thus, beauty work framed as self-expression enhances authenticity.

Study 1A tested whether framing makeup as self-expression alters how others assess an individual's authenticity compared to when no motivation is provided. All participants viewed the same woman before and after she put on makeup and were randomly assigned to the control or self-expression condition. Those who learned that the woman wore makeup to express herself perceived her as more authentic ($M = 4.60$, $SD = 1.15$) than those in the control condition ($M = 4.02$, $SD = 1.22$; $t(289) = -4.15$, $p < .001$, $d = .49$).

Study 1B extended the examination of self-expression to perceptions of both genders. Participants viewed either a man or woman who had engaged in the same beauty practice: dying hair from brunette to blonde. A 2(motivation: control vs. self-expression) by 2 (gender of consumer: female vs. male) between-subjects ANOVA revealed a significant main effect of motivation, $F(1, 359) = 10.92$, $p = .001$, with self-expression seen as more authentic ($M = 4.79$, $SD = 1.27$) than control ($M = 4.36$, $SD = 1.14$), $d = .36$. Moreover, there was no main effect of gender or significant interaction.

Study 1C tested authenticity perceptions of low vs. high effort beauty routines in the context of self-expression. A 2(motivation: self-expression vs. control) x 2(effort: low vs. high) between-subjects ANOVA on authenticity revealed a significant 2-way interaction $F(1, 368) = 10.67$, $p = .001$. In the high effort conditions, the individual was seen as more authentic when the effort was in service of self-expression ($M = 4.37$, $SD = 1.17$) relative to control ($M = 3.83$, $SD = 1.20$), $t(177) = 9.43$, $p = .002$, $d = .46$. In contrast, there was no effect of motivation on the low effort conditions between self-expression and control, $t(191) = 1.72$, $p = .19$.

Study 2 tested whether others assume that the motivation behind beauty work is to self-enhance. We compared how others perceived the same individual who invests high effort into their appearance across the following conditions: no information, self-expression, and self-enhancement. The individual was seen as more authentic when they were motivated by self-expression ($M = 4.76$, $SD = 1.28$) compared to the other conditions ($M = 3.51$, $SD = 1.22$), $t(213) = 6.86$, $p < .001$. In addition, the self-enhancement ($M = 3.34$, $SD = 1.20$) and control ($M = 3.70$, $SD = 1.21$) conditions did not significantly differ from each other.

Study 3 examined the implications of the self-expression motivation for consumers who actually engage in beauty work. Women learned that a cosmetics brand believes that makeup is in service of self-expression versus self-enhancement. Women then actually tried on a lipstick made by that brand. Those in the self-expression condition expressed higher purchase intention ($M = 4.27$, $SD = 1.66$) toward the lipstick compared to those in the self-enhancement condition ($M = 3.65$, $SD = 1.48$); $t(260) = 3.17$, $p = .002$, $d = 0.39$. In turn, we found that felt authenticity mediated the relationship between motivation and purchase intentions, 95% CI = [.08, .58].

In addition to varying self-expression versus self-enhancement, Study 4 manipulated whether a product resulted in low versus high physical transformation. A 2(motivation: self-enhancement vs. self-expression) x 2(transformation: low vs. high) between-subjects ANOVA also revealed a significant main effect of motivation, $F(1, 451) = 9.84$, $p = .002$. Participants who viewed the self-expression motivation had higher purchase intentions ($M = 4.60$, $SD = 1.81$) compared to those who viewed the self-enhancement messaging ($M = 4.09$, $SD = 2.03$), $d = 0.27$. There was no significant interaction with transformation suggesting that the positive effect of self-expression extends to both high and low transformation beauty products.

Study 5 analyzed social media content generated by consumers on Instagram before and after CoverGirl changed its slogan to emphasize the self-expressive capacity of makeup. We scraped all posts with the brand's old self-enhancement slogan, #easybreezybeautiful, the summer before the rebrand, and all the posts with the new self-expression slogan, #iamwhatimakeup, the summer after the rebrand. The images were then coded for a set of controls in addition to three dependent measures: level of makeup on the person in the image, whether the makeup was unique, and whether the poster disclosed their use of makeup. A regression with level of makeup as the continuous outcome variable and brand hashtag as the predictor, in addition to the control variables, demonstrated a significant positive effect, $b = 1.13$, $SE = .22$, $p < .001$, with consumers who used the self-expression hashtag displaying higher levels of makeup than those who used the self-enhancement hashtag. A logistic regression with unique makeup as the outcome also revealed a significant effect of the hashtag, $b = 1.13$, $SE = .22$, $= 7.85$, $p < .001$, with consumers who used the self-expression hashtag more likely to be wearing unique makeup. A logistic regression on the likelihood of disclosing makeup use demonstrated a significant positive effect of hashtag, $b = 2.24$, $SE = .53$, $p < .001$, with consumers who used the self-expression hashtag more likely to disclose their use of makeup.

These findings contribute to our understanding of the role of authenticity in consumption and have practical implications for companies that focus on beauty and personal care.

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'Tell Me Now, How Should I Feel?': Letting Go or Holding in Emotions Arising Through Art Consumption Experiences

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EXTENDED ABSTRACT

This study aims to understand how consumers access and make sense of aesthetic consumption experiences through the lenses of emotion regulation processes. While current research has mainly concentrated on the role of emotions as an outcome of an aesthetic experience, it has paid insufficient attention to emotions as a side of action (Illouz, 2009). This study considers an aesthetic experience as a dialogical encounter between the consumer and the artwork, where consumers use emotional skills to co-create the meaning of the experience (Sullivan & McCarthy, 2009; Bradshaw, 2010).

Within such highly emotionally rich and unexpected contexts, like the arts, consumers regulate their emotions to harmonize their inner states and actions in order to position themselves in the experience and interpret its meaning (Joy & Sherry, 2003; Greenberg, 2004). Given that emotion regulation is a dynamic process through which consumers manage their emotions to respond to ongoing demands of an experience (Gross, 1998), understanding these processes provides valuable insights into such consumption fields.

In order to advance sequence-process models of emotion regulation (Gross, 1998; Gross, 2013) and meaning-making in this context, we approach it from a dialogical perspective (Greenberg, 2004; 2012). In this approach, the self functions as a 'society of mind' consisting of multiple identities, which have their own emotions and thoughts. Accordingly, consumers in emotional experiences react with initial responses (raw and unregulated reaction to experiences) that can be different from their secondary emotional responses (consumers' responses to or defences of primary emotions- i.e. regulation) (Greenberg, 2004). Secondary emotions are important because they can obscure what consumers experience at a deeper, raw affective level.

Regulation takes place at the interaction between primary and secondary processing and/or when dealing with secondary emotions. In case consumers do not become aware of the primary emotion in relation to the secondary emotion, this can disconnect consumers from the experience (Greenberg, 2004). Thus, emotion regulation can be seen as an interplay between emotions and identity that results in connection to the experience, meaning, and transformation. We explore how consumers regulate emotions within an art context through the interplay of identities and emotions to reveal the role of emotions in shaping aesthetic experiences.

The data for this research were collected from two contemporary art exhibitions, i.e. the Damien Hirst and the Biennale of Contemporary art exhibitions. These exhibitions were chosen as the consumption milieus because of the intense and uncanny feelings and sensations that contemporary art elicits (Venkatesh & Meamber, 2008). A semi-structured diary design provides revelatory consumer narratives as it unpacks thoughts, emotions and actions as they are experienced within particular contexts (Gould, 2010; Maguire & Geiger, 2015). The evidence emerged from qualitative diaries of 10 visitors to Hirst's exhibition and 20 visitors to the Biennale exhibition. The data were analysed by using narrative analysis (Patterson, 2005; Cassell & Bishop, 2018).

Our findings can be organised under two themes, *disconnecting from the experience and feeling connected to the self* and *connecting with the experience and transforming the self*. The first theme explains that artworks influence consumers' emotional states and ac-cordingly their interpretive standpoints (e.g. Chen, 2008). However, when consumers cannot identify with the arising emotional states, the process of emotion regulation begins through consumers' fluctuation to familiar identity positions. Through this process, emotions that do not help consumers to connect to the exhibition are disregarded and the process brings to the foreground emotional states with which they relate to. Despite this, all of the experienced emotions participate in the experience, thus helping in its shaping and interpretation. Beneath this emotional fluctuation, consumers attempt to regulate what they feel and position themselves in the experience to overcome puzzling encounters with artworks.

This theme provides a more dynamic understanding of emotional immersion (Minkiewicz et al., 2014), which extends beyond the extant emphasis on context (Carù & Cova, 2007). It shows that emotional immersion can be disrupted by the interaction between primary and secondary emotions and explains this disruption as leading consumers to immerse themselves in specific identity and emotional states that disconnect them from the context and connect them to their selves.

The second theme indicates that consumers' acceptance of primary emotions arising through their interactions with artworks enabled them to alter their existing perspectives on themselves. This acceptance of primary emotions was accompanied by secondary emotional responses, which conflicted with the primary emotions. Consumers in their attempts to regulate these conflicting emotions, engaged themselves in a dialogical interaction with the artworks and themselves. This engagement surrendered consumers 'to the power of the artwork and subsequent reflection on that experience' (Sullivan & McCarthy, 2009, p. 184)

While prior research on (aesthetic) consumption experiences stresses the importance of emotions in accessing the 'value of otherness' (Chen, 2008) and achieving self-transformation (Illouz, 2009; Leder et al., 2004), it does not account for the interaction of primary and secondary emotions through which consumers access their felt emotions (Hermans & Hermans-Konopka, 2010). Through this theme, our study demonstrates how the interaction of primary and secondary emotions, by initiating internal dialogical processes, gives access to the inner realm of the experience (i.e. different identity positions; access to primary emotions) and as such it becomes the basis for discovering and transforming one's self.

In sum, this study, from a theoretical viewpoint, illuminates novel aspects of the emotion regulation process in experiential consumption. First, it illustrates that consumers' access or immersion to an aesthetic experience relates to consumers' immersion to their felt emotions and identities. This challenges previous conceptions regarding the connection between immersion and authenticity. Second, it sheds light into the role of dialogue in the emotion regulation process and unpacks the role of primary and secondary emotions in the process of discovering and transforming one's self (Gao & Kerstetter, 2018). From a managerial viewpoint, curators and museum managers by facilitating emotional access to an experience can create experiences that are memorable in terms of accessing the 'value of otherness' rather than of being satisfied by the 'value otherness'.

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Belief in the Infallibility of Intuitions Predicts Receptivity to Lifestyle Branding

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EXTENDED ABSTRACT

While science communicators may denounce the dissociation between evidence and trust in the "post-truth" era, marketers may desire a dissociation between evidence that a product is ineffective and trust in the brand. Rather than relying on beliefs in functional benefits, marketers may strive to create perceptions that brands can serve as effective relationship partners worthy of deep connections. This idea is reflected in "lifestyle" branding, in which products are prized not just having more abstract, self-expressive secondary benefits. For example, La Croix sparkling water is sold not just one taste, but on its ability to help customers live authentic, adventurous lives (Mikel, 2016). Why would people be interested in such a branding strategy that is an ostensible diversion from actual product function?

We suggest that people's receptivity to such strategies are shaped by intuitive thinking that is "fast and loose" with regards to judgments of causal responsibility. Intuitive thinking is linked to overestimations of causal patterns (Whitson & Galinsky, 2008), including overestimating the extent to which, for example, vaccines cause autism or homeopathic medicine is effective (Sherman, 2012). Therefore, we hypothesize that people who believe in the infallibility of intuitions have come to expect that products have causal influence over many important outcomes, and as a result will tend to be receptive to the idea that products *should* have a role in people's lives above and beyond mere function.

We test our hypothesis in two studies with two different product types (pseudoscientific medical bracelets and soft drinks). In Studies 1a and 1b, respondents are introduced to one of the products, and told the products are sold not just on their functional benefits, but also on secondary benefits often used in "lifestyle" brand marketing. In Study 1a, participants are told about magnetic bracelets are sold not only on pain relief claims, but on their ability to make people feel empowered. In Study 1b, participants are told about soft drinks are sold not just on taste, but the drink's ability to help people express themselves. Following this description, respondents rate how important it is that these products are able to deliver lifestyle branding benefits.

Participants next rate their tendency to think intuitions are infallible. To measure belief in intuitions, we use the "Intuitions Reveal Truth" (IRT) sub-scale of the "Finding Your Truth" scale (Stein, Swan, & Sarraf, under review), a scale designed to measure the extent to which people extend individuality to truth. The IRT scale measures the extent to which people think that intuitions have an unshakable truth at an equal or higher level than objective facts.

This tendency and ratings of the importance of lifestyle branding benefits were strongly correlated, even when controlling for similar reasoning biases and performance on the Cognitive Reflection Test.

We further hypothesized that the link between endorsing intuitive thinking and having a broad sense of causal responsibility is *separate* from evaluations of evidence. Thinking intuitions are infallible that does not make people evidence insensitive per se. Rather, we suggest judgments of factual truth (evidence) and emotional truth (intuitive beliefs about causal) are two separate, parallel processes. Study 2 contained the same main measures as the first. However, after these measures, we introduced a between-subjects factor: half of respondents were given a message persuasively arguing against the functional benefits of the product. Participants in the pseudoscientific medical bracelet study (study 2a) were given a message explaining that magnetic bracelets are not actually effective for reducing pain, and participants in the soft drink study (study 2b) were told the soft drink did not taste good. Following this, respondents rated their confidence that the product would deliver the advertised benefits, as well as their trust in the brand's ability to develop valuable products.

The message was effective – respondents exposed to the message exhibited a reduction in their confidence that the product could deliver on functional benefits, and had lower trust in the brand. Additionally, similar to Study 1, believing intuitions are infallible was also linked to trust in the brand (positively), an effect mediated by thinking that the products should provide lifestyle branding benefits. However, there was no evidence that these two effects interacted. Thus, we confirm our hypothesis that thinking intuitions are infallible does lead to perceptions of trust in a brand's value, independent of beliefs that the product provides functional benefits, and that factual evidence of the product's effectiveness had a separate effect on overall evaluation of the brand from intuitive reasoning style.

These studies suggest that commentaries linking intuitive thinking to lack of a belief in science might be slightly off the mark – it could be that even intuitive thinkers are persuaded by evidence, but that evidence is just one part of how they form judgments. Previous research has shed much light on how people meld evidence to reach desired conclusions, but the current paper expands the role of beliefs about the nature of truth per se. Even if people reach the same conclusions about evidence, intuitive thinking might still sort people into different points of view.

INTRODUCTION

Recent research has revealed compelling demonstrations of the minimal role evidence can have in belief. For example, messages designed to reduce misconceptions about vaccines can produce no effect (Nyhan et al., 2014) and some people have no problem supporting unverifiable conspiracy theories (Wood, Douglas, and Sutton, 2014). While science communicators might decry this dissociation between evidence and trust, marketers might desire it. Marketers strive to create perceptions that brands not only create effective products but can serve as effective relationship partners worthy of deep connections (Fournier, 1998). Such strategies seemingly rest on the assumption that people take an expansive view as to what benefits a product can provide, with functional benefits merely one part of the equation. A marketing strategy that embraces this principle is *lifestyle branding*, in which brands are marketed as being vehicles for self-expression or connections to certain group identities (Jung & Merlin, 2003; Chernev, Hamilton, and Gal, 2011).

We suggest that there is sage wisdom in such a marketing strategy that sidesteps evidence of functional benefits. Building on prior research linking intuitive thinking to relatively unrestricted judgments of causality (e.g., Whitson & Galinsky, 2008; Sherman, 2011), the current research tests the hypothesis that people who believe that the power intuition will tend to be receptive to the idea that products *should* have a role in people's lives above and beyond the functionality of the product, a type of thinking that should be sympathetic to lifestyle branding. Thus, our goal is to identify a belief in the infallibility of intuitions as a predictor of endorsement of lifestyle branding, and show that this link leads to feelings of trust towards a brand independently of product function criticisms.

The first study tests the idea that believing intuitions are infallible is tied to thinking that products should provide benefits above and beyond functionality, specifically benefits tied to self-expression and social identity. In the second study, we demonstrate that this process holds even in the presence of a message effectively attacking the product on functional grounds. Further, we provide evidence that persuasive evidence and beliefs fostered by the power of intuitions impact brand valuation via two separate processes.

To measure belief in the infallibility of intuitions, we use the "Intuitions Reveal Truth" (IRT) sub-scale of the "Finding Your Truth" scale, a novel scale designed to measure the extent to which people extend individuality to truth (Stein, Swan, and Sarraf, *under review*). The IRT scale, inspired by ideas such as Stephen Colbert's concept of "truthiness", measures the extent to which people think that intuitions have an unshakable truth at an equal or higher level than objective facts. Here, we also include the Pennycook and Rand (2018) seven-item version of the Cognitive Reflection Test (CRT) as a co-variate and our measure for reasoning ability.

STUDY 1A

Studies 1a and 1b test the hypothesis that thinking intuitions are infallible is linked to thinking that products should provide non-functional, "secondary" benefits like those invoked by lifestyle brand marketing, such as self-expression and empowerment.

Procedure

All participants (n = 212, all participants recruited on mTurk) were instructed to read a short excerpt detailing a brand of magnetic therapy bracelets, Willis Judd, and were shown a forty-six second Willis Judd advertisement. In the excerpt, participants were told that Willis Judd is sold on both lifestyle and functional benefits.

Dependent Variables

Participants rated how important each of five attributes are when deciding whether to purchase a treatment for physical pain on a 1-5 scale (1 = *Not at all important*, 5 = *extremely important*). Two of the five pertained to functional attributes (e.g., ability to treat physical pain). The other three, averaged into the main dependent variable of this study, pertained to secondary, lifestyle branding-like attributes (α = .87):

1. It helps me to feel empowered.
2. It helps me to express myself.
3. It helps me to feel in control of my health.

Participants also answered a purchase interest question as follows: "Keeping in mind the above excerpt and video, how interested would you be in purchasing a Willis Judd bracelet (average retail price about $35) if you were experiencing physical pain?" on a 1-5 scale (1 = *Extremely uninterested*, 5 = *Extremely interested*). This question was asked for exploratory purposes.

Following this, participants completed the FYT scale questionnaire, which contained the Intuitions Reveal Truth (IRT) scale (scored on a 5-point scale), as well as the Pennycook and Rand (2018) seven-item version of the Cognitive Reflection Test (CRT).

Results.

Hypotheses

Studies 1a and 1b test H1, defined as the tendency to trust intuitions (measured by the IRT scale, α = .84) would be correlated with a belief that brands can provide value in various ways above and beyond.

Consistent with H1, we find a correlation between the Intuitions Reveal Truth (IRT) scale and thinking that the Willis Judd bracelets should provide secondary benefits such as self-expression and empowerment, $r = .51$, $p < .001$.

STUDY 1B

Procedure

Emphasizing external validity, Study 1b (N = 213) was identical to study 1a with the brand in question being LaCroix sparkling water, a soft drink lifestyle brand that incorporates ideas of adventure and liveliness into their brand image.

Dependent Variables

As in Study 1a, participants rated the importance of five attributes when deciding whether to purchase a soft drink on a 1-5 scale (1 = *Not at all important*, 5 = *extremely important*).

The "secondary benefit" attributes comprising the dependent variable of this study are as follows (α = .93):

1. It gives me a sense of adventure.
2. It helps me to express ideals I have for myself.
3. It helps me feel connected to other people.

Results

Consistent with Study 1a, we observed a correlation between the IRT scale and thinking that LaCroix sparkling water should provide secondary benefits, $r = .54$, $p < .001$. Thus, we demonstrate that our effect holds true irrespective of whether our participants are asked to evaluate products pertaining to personal taste or to scientific thinking.

Having established that believing that intuitions are infallible is linked to thinking products *should* provide secondary, non-functional benefits (such as those touted by "lifestyle brands") in Studies 2a and 2b we seek to show that this link also leads people to trust brands to deliver quality products (H2), even in the presence of a message effectively criticizing the function of the product (H3) (e.g., for the bracelets, a message explaining the bracelets do not actually reduce pain, and for La Croix, a message arguing the soda does not have a good taste).

STUDY 2A

Procedure

The first half of the study was identical to study 1a, minus purchase interest. Once participants (N = 306) rated the importance of primary and secondary benefits (using the same items as Study 1a), half of participants (randomly assigned) were instructed to read a message attacking Willis Judd bracelets on functional grounds.

Dependent Variables

Next, to test the effectiveness of the message, participants were instructed to use a slider to indicate their confidence that Willis Judd bracelets could deliver on five attributes (primary and secondary) from 0% to 100%.

The "primary function" attributes are as follows (α = .94):
1. It helps treat physical pain.
2. It is as effective or better than other alternatives in treating pain.

The "secondary function" attributes are as follows (α = .89):
1. It helps me to feel empowered.
2. It helps me to express myself.
3. It helps me to feel in control of my health.

Following this measure, respondents answered three questions tapping perceptions that Willis Judd could be trusted to deliver valu-

able products. The questions, rated on a 1-5 scale (1 = *Strongly disagree*, 5 = *Strongly agree*), are as follows (α = .92):

1. I think the bracelets manufactured by Willis Judd are all around valuable.

2. Willis Judd produces products I feel positively about.

3. Willis Judd can be counted on to produce products that can be helpful to people.

Hypotheses

In studies 2a and 2b, our goal is to provide support for H2, that intuition endorsement is linked to greater trust in the brand's value due to beliefs that a product should provide secondary benefits, and H3, that the process in H2 occurs even in the presence of an effective communication arguing against the product's functional benefits.

Results

The message was in fact successful at reducing confidence in the functional benefits of the bracelet. Those who saw the message ($M = 24.14$, $SD = 27.16$) had lower confidence in the bracelet's functional benefits than those who did not see the message ($M = 35.43$, $SD = 28.59$; $t = 3.54$, $p < .001$, Hedges $g_s = .40$).

Additionally, supporting H2, IRT (α = .82) was correlated with beliefs that the bracelet should provide secondary benefits ($r = .48$, $p < .001$), which was in turn correlated with trust in Willis Judd's value ($r = .64$, $p < .001$), as necessitated by H2.

Mediation analysis

To provide support for H2 and H3, we conducted a mediation analysis using PROCESS (Hayes, 2018) with IRT as the independent variable, belief that the bracelet should provide secondary benefits as the mediator, and trust in the brand value as the dependent variable.

Consistent with our hypothesis, this indirect effect was significant, $\beta = .30$ 95% CI: [.21, .39]. The direct effect was also significant, $\beta = .35$, 95% CI: [.23, .47]. An additional PROCESS analysis revealed that, in line with H3, this mediation effect was not moderated by the presence of the message persuading people against the functional benefits of the product, though the message did have a main effect, $\beta = -.72$, 95% CI [-.126, -.17]. Thus, our hypothesized mediation model held, even in the presence of the persuasive message effectively reducing belief in the bracelet's functional benefits.

STUDY 2B

Procedure

Study 2b was identical to Study 2a with the brand being LaCroix sparkling water. Once participants (N = 302) rated the importance of primary and secondary benefits, half were randomly assigned to see a message attacking LaCroix sparkling water on functional grounds.

Dependent Variables

Participants were instructed to use a slider to indicate their confidence that LaCroix sparkling water could deliver on five attributes (primary and secondary) from 0% to 100% before rating the brand's value on a 1-5 scale.

The "primary function" attributes are as follows (α = .90):

1. I like the flavor of it.

2. It tastes as good or better compared to other options I have (e.g, soft drinks like Coca-Cola and other sparkling water brands).

The "secondary function" attributes are as follows (α = .95):

1. It gives me a sense of adventure.

2. It helps me to express ideals I have for myself.

3. It helps me feel connected to other people.

The "trust in La Croix's value" questions, rated on a 1-5 scale (1 = *Strongly disagree,* 5 = *Strongly agree*), are as follows (α = .91):

1. I think the soft drinks manufactured by LaCroix are all around valuable

2. LaCroix produces products I feel positively about

3. LaCroix can be counted on to produce products that can be enjoyable to people".

Results

As in Study 2a, the message did significantly decrease confidence that LaCroix would taste suitably well. Those who saw the message ($M = 46.09$, $SD = 30.96$) had less confidence in LaCroix's taste than those who did not ($M = 60.59$, $SD = 25.23$, $t = 4.48$, $p < .001$, Hedges $g_s = .56$).

Mirroring Study 2a, and supporting H2, IRT was again correlated with beliefs that LaCroix should provide functional benefits ($r = .35$, $p < .001$), which was in turn correlated with trust in LaCroix's value.

Mediation Analysis

We ran a mediation analysis with IRT as the independent variable, beliefs that LaCroix should provide secondary benefits as the mediator, and trust in LaCroix's value as the dependent variable. Replicating Study 2a, there was a significant indirect effect, $\beta = .13$, 95% CI: [.07, .21]. The direct effect was not significant, $\beta = .05$, 95% CI: [-.08, .18]. Also, as in Study 2a, an additional PROCESS run with the presence of the persuasive message as a moderator of the mediation supported the idea that the persuasive message and belief in intuitions operated independently. While there was a main effect of the persuasive message $\beta = -.59$, 95% CI: [-1.05, -.14], the moderation was not significant.

Thus, studies 2a and 2b converge on the idea that thinking that intuitions are infallible does lead to perceptions of trust in a brand's value, independent of beliefs that the product provides functional benefits. These data suggest that people are not evidence insensitive per se, but that there are independent routes of influence besides persuasion, particularly a route governed by intuitions that products should provide lifestyle-brand-like benefits.

DISCUSSION

These studies contribute to knowledge of the "post-truth" era (Lewandosky, Ecker, and Cook 2017) by demonstrating that receptivity to lifestyle branding is predicted by thinking that intuitions are an infallible source of truth. We would further argue that, in addition to one defining feature of the "post-truth" era being that people are resistant to evidence, another defining feature would be the embrace of communications that make evidence simply irrelevant. This could be a gateway to getting people to believe the unbelievable because it compels people to fall back on the much easier to convince "truthiness" reasoning style as opposed to rational reasoning.

Similarly, we think lifestyle branding seems to be a fairly transparent attempt at making products seem like they have spurious benefits, an attempt at manipulation most people would prefer to avoid (Friested and Wright, 1994). Yet, at the same time, enough people find it compelling for us to conclude that perhaps classic theories on how many routes to persuasion there are (e.g, Kelman 1961; Petty and Cacioppo 1986) can be recast under the idea that persuasion is just one possible route to attitude change.

Further, though research on motivated cognition has focused on how people bend evidence in order to reach desired conclusions (Kunda, 1990; Haidt, 2001; Kahan et al., 2012), we believe there is a case for there being separate effects of IRT reasoning style and per-

suasion on people's judgments about truth and value.. "Emotional truth" judgments are conceptually different from the motivated rejection of evidence invoked in current research on political and scientific beliefs in that motivated rejection of evidence literature generally casts intuition as a restrictive force – people will only believe the set of facts that matches, or will twist facts to bend to, preconceived notions. On the other hand, "emotional truth" judgments caused by IRT reasoning style can tie together tenuously linked concepts, like a pseudoscientific medical bracelet and self-expression. The character of emotional truth judgments might not be restrictive, but expansive.

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Harnessing Dynamic Measures of Conflict to Investigate Decisions Under Risk

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EXTENDED ABSTRACT

"The experience of conflict is the price one pays for the freedom to choose." – Tversky & Shafir, 1992.

Decision-making requires navigating the conflict that arises when choosing between multiple alternatives. One class of decisions for which conflict is a central component are choices involving risk – choices that pit an outcome that is certain against an outcome that may turn out better or worse. While many researchers have identified conflict as a central feature of making tradeoffs in decisions (Bettman, Johnson, Luce, & Payne, 1993; Janis & Mann, 1977; Shafir, Simonson, & Tversky, 1993; Tversky & Shafir, 1992), the methods for investigating it carry drawbacks (Freeman, 2018; Schneider & Schwarz, 2017). In the present research, we propose a dynamic, accessible, scalable, and readily-interpretable technique to quantifying conflict within choices under risk. Specifically, we use mouse-tracking – a technique that allows researchers to gain a real-time window into how a decision unfolds by sampling computer mouse location hundreds of times per second as participants make a decision (Freeman, 2018; Freeman & Ambady, 2009, 2010; Song & Nakayama, 2006; Spivey, Grosjean, & Knoblich, 2005). Mouse trajectories can be used to quantify the conflict present in a given decision by quantifying the directness of the trajectories – the logic being that, to the extent that the unchosen option is of similar desirability to the chosen option, people should be more attracted to it, which should be revealed by less direct trajectories towards the chosen option. This directness is quantified by taking the area between the actual trajectory and a straight trajectory, and is referred to as the area under the curve (AUC).

Past work in categorization has demonstrated that trajectory directness is tightly linked to response conflict. For instance, early researchers found greater conflict when categorizing atypical (e.g., "whale") compared to typical (e.g., "cat") exemplars as fish versus mammals (Dale, Kehoe, & Spivey, 2007). Notably, despite the critical role of conflict in decision-making, mouse-tracking has had relatively limited impact in decision research. In the present research, we investigated three hypotheses:

Hypothesis 1 — *First, we seek to validate that mouse trajectories are a sensitive measure of conflict within a decision. To this end, we expect AUC to shift with the context of each decision, showing greater conflict as the subjective value of accepting versus passing the gamble become more similar, and less conflict as the subjective value of one option dominates the other.*

Hypothesis 2-3 — *Beyond simply documenting that mouse-tracking can sensitively detect the conflict in a given decision, H2 and H3 test whether conflict within choices, either at the aggregate (H2) or single-trial level (H3), can be useful predictors for people's risk preferences more generally, providing information that a focus on choice alone might omit. To test this, we use conflict, both at the aggregate and the single-trial level, to predict participants' loss aversion (lambda).*

We test these hypotheses across three preregistered studies (total N = 660) in which we measure participants' mouse movements as they made 215 decisions in which they decided between accepting or passing a 50-50 gamble. Gambles were adapted from Sokol-Hessner and colleagues (2009), and consisted of two types – mixed (which offered a 50/50 gamble for either gaining or losing money, with the certain option always = $0) and gain-only (which offered a certain gain against a 50/50 gamble of a larger gain or $0). Each trial started with participants' mouse cursors in the bottom center of the screen, after which the gamble information would appear just above the cursor. Participants then moved their mouse to one of two buttons in the top-left and top-right of the screen that corresponded to passing and accepting the gamble. We further calculated participants' prospect theory parameters for loss aversion and diminishing marginal utility (Ahn, Haines, & Zhang, 2017).

Hypothesis 1 — *the relationship between subjective value and conflict. For each trial, we calculate the subjective value of both the gamble and the certain outcome, as well as the distance between these values. Consistent with H1, across all 3 studies, larger differences between the subjective values corresponded to less conflict – i.e., lower AUC (these results remained significant when controlling for reaction times). It appears that mouse-tracking is highly sensitive to within-subject variation in subjective value.*

Hypothesis 2-3 — *the predictive strength of conflict. We predicted that, within the mixed gambles, being unconflicted when electing an option with the chance of a loss should be characteristic of those low on loss aversion. Similarly, someone who is unconflicted when electing a certain outcome over a risky gamble suggests relatively greater loss aversion. To test this, for each participant, we calculated the average conflict when (a) accepting and (b) passing mixed gambles, yielding two indices of conflict per participant. Consistent with predictions, the more conflicted participants were when accepting the gamble, and the less conflicted participants were when passing the gamble, the greater their loss aversion. Notably, these metrics of conflict are capturing a large degree of the variance of lambda, with R^2 = .49, .60, and .59.*

Hypothesis 3 — *single trial prediction. To test whether conflict on a decision can predict information beyond choice alone, for each mixed-gamble, we first divide participants based on their choice (accept versus pass). We then ran separate regression analyses for those that passed and those that accepted, predicting lambda from conflict on that specific trial. Across all 3 studies, when deciding whether to accept or pass the mixed gambles, single-trial conflict predicted lambda in 70%*

of our analyses. This is thus even stronger support that conflict provides information over and above mere choice in decisions under risk.

Although conflict plays an integral role in both the subjective experience and theoretical understanding of decisions under risk, conflict itself is rarely studied using dynamic approaches. The present findings suggest that mouse-tracking is a sensitive measure of the conflict present in a given decision, and that by harnessing that conflict, we have the potential to gain a great deal of insight into the temporal evolution of the decision process.

Victimhood Fragility in Reaction to Service Experiences

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EXTENDED ABSTRACT

In this research, we investigate what kinds of consumers may prioritize issues of victimhood, focusing on the construct of virtuous victimhood, a set of signaling behaviors people use to recruit support from others. By signaling virtuous victimhood, consumers make a case for their deservingness based on experiencing unfair oppression or disadvantage. Consistent with the expansion of harm concepts (Haslam 2016), we propose that consumers high in virtuous victimhood exhibit higher sensitivity in commercial interactions. Unlike consumers low in virtuous victimhood, who resort to dramatic reparative actions only when confronted with clear service failure, consumers high in virtuous victimhood will be more likely to perceive potential discrimination in standard service experiences. The resulting victimhood fragility effect contributes to a broader reconfiguration of moral cultures characterized by the rise of victimhood culture (Campbell and Manning 2014).

A moral culture involves a set of expectations regarding proper reaction to insult or affront (Leung and Cohen 2011). Examples of moral cultures include honor culture, dignity culture, face culture, and, emerging most recently, victimhood culture. Sociologists first identified the emergence of victimhood culture in the phenomenon of microaggressions, where people treat minor infractions with great seriousness, as expressions of broader systemic disadvantage (Campbell and Manning 2014). One of the early classic examples of microaggressions was a flight attendant asking some customers to move to the back of a plane (Sue et al. 2007), interpreted as racial animus, showing how service failures can be seen by some customers as motivated by prejudice.

Cultural valuation of victimhood status encourages behaviors that signal oppression and deservingness. Indeed, people differ in the degree to which they engage in behaviors involving such signaling and can be measured with a validated scale (Ok et al. working paper). Virtuous victimhood consists of three subcomponents: social derogation, contextual unfairness, and moral identity symbolization (Aquino and Reed II 2002). We argue that the expectations created by victimhood culture leads to consumers sensitive to slight and likely to react aggressively in commercial interactions with companies, leading to the victimhood fragility effect. Specifically, we propose (H1) that consumers high in virtuous victimhood will be more likely to exhibit victimhood culture reactions and (H2) perceived discrimination will mediate the effect.

We designed three studies to test whether consumers high in virtuous victimhood would react with greater fragility in commercial interactions. We modeled the scenario in study 1 ($N = 349$) on the classic example of microaggression involving being asked to move on a plane (Sue et al. 2007). Study 2 ($N = 345$) replicated this result in a different context (Airbnb) and study 3 ($N = 337$) provided evidence for the perceived discrimination mediator. In studies 2 and 3, rather than imagining potential affront in an airline service experience, in the service failure condition we asked participants to imagine booking an Airbnb and then having their booking canceled after updating their profile, providing info about interests and uploading a photo. Participants imagined either a neutral service context or an experience of service failure. Following the scenario, participants reported appropriateness of various reparative actions characteristic of different moral cultures.

To test for the victimhood fragility effect, we conducted analyses of variance with victimhood culture behavior as dependent variable. Independent variables were experimental condition, virtuous victimhood (mean-centered, standardized), and their interaction. In study 1, there was a main effect of treatment ($b = -1.59$, $SE = .13$, $t = -12.52$, $p < .001$), a main effect of virtuous victimhood ($b = .19$, $SE = .08$, $t = 2.31$, $p = .021$), and an interaction ($b = .44$, $SE = .13$, $t = 3.41$, $p = .001$). A simple slopes test revealed that the slope of virtuous victimhood was significantly different from zero in the neutral condition ($b = .63$, $SE = .10$, $t = 6.18$, $p < .001$) and failure condition ($b = .19$, $SE = .08$, $t = 2.31$, $p < .021$). In study 2, there was a main effect of treatment ($b = -2.39$, $SE = .13$, $t = -17.80$, $p < .001$) and an interaction ($b = .59$, $SE = .13$, $t = 4.41$, $p < .001$). A simple slopes test revealed that the slope of virtuous victimhood was significantly different from zero in the neutral condition ($b = .71$, $SE = .01$, $t = 7.21$, $p < .001$). In study 3, there was a main effect of neutral condition ($b = -2.95$, $SE = .12$, $p < .001$) and the interaction ($b = .70$, $SE = .12$, $p < .001$) with similar simple slopes results ($b = .68$, $SE = .09$, $t = 7.57$, $p < .001$).

To test hypothesis 2, we performed a moderated mediation path analysis. The indirect effect of virtuous victimhood on victimhood culture behaviors through perceived discrimination was significant ($b = .20$, $SE = .06$, 95% CI [.09, .33]).

Consumers increasingly prioritize identity concerns when making purchase decisions and when discussing companies or brands. Firms have responded to this preoccupation using many elements of the marketing mix, from products aimed at particular marginalized groups to promotions and advertising highlighting the plight of victims (Chaney, Sanchez, and Maimon 2019). In this research, we identify a kind of consumer which tends to interpret commercial interactions through the lens of virtuous victimhood. Based on these findings, marketing managers may wish to think twice before basing promotions heavily on victim narratives, as such appeals may draw the attention of customers particularly sensitive to slight and prone to interpret commercial service as discrimination.

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How Semantic Framing Influences Consumers' Responses to Crowdfunding Campaign

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EXTENDED ABSTRACT

Crowdfunding – the use of online platforms to raise money – has recently received a great deal of attention as an alternative and appealing financing channel. Global crowdfunding reached $34.4 billion in 2015, and is forecast to continue growing at a compound annual rate of 26.87% between 2016 to 2020 (Crowdfundbeat.com 2016). This is a phenomenon that is important to understand, therefore. In addition, the crowdfunding context is of theoretical interest because the two different types of appeals that are primarily used in this context– reward-based appeals in which funders contribute in rewards promised by the fundraisers (e.g., finished products, shares, monetary rewards), and donation-based appeals that rely primarily on contributors' altruism and in which no reward is promised – can invoke very different psychological processes.

Despite offering clear applied and theoretical value, crowdfunding as a subject of exploration has largely been neglected by consumer psychologists. The current research aims to address this gap, focusing on the type of messaging that may prove efficacious for each type of crowdfunding appeal: reward-based vs. donation-based. In addressing this question, our conceptualization integrates insights from the literature on linguistic framing (Patrick and Hagtvedt 2012) with that on relationship types – in particular, the norms guiding exchange vs. communal relationships (Aggarwal 2004). This conceptualization forms the basis for our predictions that a subtle difference in the wording of a crowdfunding appeal can have substantial implications for its effectiveness. In particular, we propose that for reward-based appeals, it is more effective to frame the request for funds as a "want" rather than a "need", because doing so increases perceptions of the requester's competence – which is influential under exchange norms. In contrast, for donation-based appeals, framing the request in terms of a "need" rather than a "want" is more effective, because the former enhances perceptions of the criticality of the funding request – which is influential under communal norms.

We tested these hypotheses in a pilot study and three experiments.

The pilot study used existing market data on Indiegogo – a top crowdfunding website – to provide directional evidence for the proposed effect. By coding real data from the crowdfunding website (Indiegogo.com), we demonstrated that employing a "want" or "need" claim in project request affects funding amounts differentially depending on whether the appeal is donation-based or reward-based. While pilot study provided initial field evidence, the followed online studies tested the effect in more controlled experimental design.

Study 1 documented outcome evidence for our major hypotheses. The participants were presented with one of the four versions of crowdfunding project of a firm asking for fund to develop a new piece of technology and asked to indicate their donation intention. The results showed that a reward-based appeal is more effective in attracting funding with a want vs. a need frame, and that the reverse is true of donation-based appeals, under the context of a firm asking for fund to develop a new piece of technology.

Study 2 replicated this effect in a more personal appeal context (i.e., an individual attempting to enter culinary school) instead of organizational cause in study 1. In addition, in order to provide process insight, the participants' perceptions for the competence of the fundraiser and criticality of the funding request were measured after funding intention. The results from mediation analyses indicated the mediation role of competence (criticality) perceptions in the context of a reward-based (donation-based) appeal.

Finally, in support of the premise that the observed differences for a reward-based vs. a donation-based appeal derive from the former being anchored in an exchange relationship and the latter in a communal relationship, study 3 replicated our findings by directly priming relationship type instead of appeal type, using the same crowdfunding context in study 2. Directly activating exchange vs. communal norms in this study produced exactly the same pattern of results as those obtained in earlier studies with a reward-based vs. a donation-based appeal, respectively. A want frame was more effective under exchange norms, and a need frame under communal norms – moreover, the former effect was mediated by perceived competence of the fundraiser, and the latter by perceived criticality of the project.

Our findings offer novel insights into how and why the subtle linguistic elements of "want" versus "need" claims influence funders' motivation and behavior in a crowdfunding project. This research advances knowledge in several directions. First, it contributes to the growing literature on semantic framing, which posits that words which are often used interchangeably have subtly different shades of meaning. Adding to that conversation, our research shows how two very commonly used words in an appeal context – "want" and "need" – have very different connotations, and accordingly exert a differential impact on appeal effectiveness. Second, by merging insights from two very different literatures that have (to our knowledge) not spoken to each other as yet – semantic framing and relationship norms – we are able to build theoretical knowledge in both areas. Third, this research is one of the first to introduce a consumer psychology perspective to the increasingly important domain of crowdfunding. Fourth and relatedly, the findings from this research carry straightforward applied implications for those using crowdfunding to raise money; we show how a specific difference in messaging can increase the effectiveness of each type of appeal: reward-based vs. donation-based.

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Is Product Experience Improved by Ties to Desired Identity?
A Case of Functional Pleasure

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EXTENDED ABSTRACT

Building and sustaining a desirable identity is a primary human motivation (Gecas, 1982; Turner, 1982; Berzonsky, 1993; Epstein, 1980). Among other strategies, consumers employ products to support desired social identities (Tajfel & Turner, 1979; Turner, 1975). Consumers are therefore attracted to and purchase products associated with desired identities, (Kleine III, Kleine, & Kernan, 1993; Ross, 1971). For example, people dress in particular clothing (Kang, Sklar, & Johnson, 2011), or undertake plastic surgery improve their self-image (Schouten, 1991).

Consumers may use product choices to not only build, but to maintain and protect cherished identities. For example, loss of control (Levav and Zhu 2009) or power (Rucker and Galinsky 2008) may shift product choices in order to restore control or power. Similarly, deficits in affiliation needs (Lee and Shrum 2012) and intelligence (Gao, Wheeler, and Shiv 2009) can steer consumers towards identity congruent choices.

While research has explored how identity guides product choices, no previous work explores how identity congruence enhances product experience. We show that product experience is improved when it matches desired identity.

Additionally, previous research has demonstrated that food tastes better when it answers *physiological needs*. We argue that food will taste better when answering the *psychological need* to support as and maintain desired identity.

Enjoyment is functional, and is generated by fulfilling needs. For instance, people enjoy heat when hypothermiac (Cabanac, 1969), and enjoy food more when hungry (Cabanac, 1979; Cabanac, 1992). Food enjoyment is increased when food contains currently needed nutrients (Drewnoski 1995; Drewnoski et al. 1992; Bertino, Beauchamp, & Engelman, 1982).

If pleasure does generally signal need fulfillment, then fulfillment of psychological needs, as well as physical needs, should lead to increased pleasure. Accordingly:

Hypothesis 1   Desire for identity will be correlated with enjoyment of identity related products

Possession of an identity may increase the positive effects of identity on taste experience. This is because people seek to confirm their identity (Swann et al. 1984; 2003). Identities are often held insecurely and require bolstering (Crocker 2001; Jordan et al. 2003). Thus, supporting an already possessed identity serves an important function.

Products may not suffice to establish an identity one does not have. For example, drinking Gatorade would not suffice to make one an athlete. However, when one already identifies as athletic, wearing appropriate gear or eating appropriate food may help support and protect the identity. Consequently, products may be more functional when one already possesses an identity, producing potentially stronger effects when an identity is already possessed.

Hypothesis 2   Taste will be more greatly enhanced for those who see themselves as possessing an identity,

producing an interaction between identity possession and desirability.

STUDY 1: IDENTITY DESIRABILITY AND TASTE EXPERIENCE

Amazon Mechanical Turk participants (N=62) were presented with a list of eight food brands, and rated their tastiness on 9-point Likert scales. They also rated how desirable they found the image tied with each food.

We analyzed the data using a mixed model with repeated measures. There was a significant effect of identity on taste evaluation such that those who expressed a stronger desire for an identity tied to the food evaluated it as tastier. $F(1,60)=336.27$, $p <.0001$.

STUDY 2: TASTES ATHLETIC

Study 2 was designed to provide evidence for H_2. To examine this, we separated desired vs. current identity by measuring not just the desirability of an identity but belief about current identity. Participants (N=85) were asked to taste and evaluate powdered Gatorade, described as a sports drink consumed by athletes.

Participants rated the drink's taste and quality on 9-point likert scales. They also rated how much they'd like to be perceived as part of the group of the drink's consumers, and whether or not they perceive themselves as athletic.

We tested our hypotheses using a general linear model which included the effect of desire for identity, self-perception as an athletic person and the interaction between the two on taste. There was a significant effect of desire for an identity on taste, such that people who aspire more strongly to possess the identity of those who consume the drink experienced the drink as tastier: p=.01 level: $F(1,84)=11.20$, $\eta^2=.11$.

In support of H_2, we found an interaction between desire for identity and self-perception as an athletic person. Specifically, desire for identity was positively related to taste experience and drink quality evaluation only for those who perceive themselves as athletic: $F(1,83)=8.32$, $p=.01$, $\eta^2=.08$ for taste experience, and $F(1,83)=3.89$, $p=.05$, $\eta^2=.04$ for quality evaluation.

STUDY 3: DARK AND SOPHISTICATED

The third study aimed to demonstrate the dependence of our findings on a tie between product and identity. Participants (N=166) were randomly assigned into two conditions: one where dark chocolate was said to be tied to sophistication, and one where it was not. They tasted and rated dark chocolate on a 9-point likert scale. They also rated their desire to be sophisticated and whether they currently see themselves as sophisticated.

Participants rated chocolate as tastier the more they desired to appear sophisticated, with stronger results for those who consider themselves sophisticated (consistent with study 2). This only occurred for participants who were given an explanation about the link between dark chocolate and sophistication. In other words, there was a significant 3-way interaction between sophistication of dark chocolate, desire to appear sophisticated, and feeling sophisticated (p<.05).

GENERAL DISCUSSION

The more a person desires to be perceived as having a particular identity, the tastier they say products matching that identity are. In the same way that food tastes better when it fulfills nutritive needs, it tastes better when it fulfills psychological needs. More generally, subjective product (food) experience is improved when a product helps support a psychological need (desired identity).

The studies contribute to our understanding of the relation between identity and product choice. The work also indicates a role for motivation in liking: when products fulfill a motivation, physical or psychological, product experience is improved. This research also contributes to our understanding of branding by stressing the importance of identity-related branding and clarifying when it would be more effective.

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When a Brand Betrayed Me: How Brand Betrayal Increases Consumer Self-Disclosure for Future Personalized Offerings

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EXTENDED ABSTRACT

Previous study claims that the experience of brand betrayal results in longer lasting negative consequences and is more difficult for brand managers to recover (Reimann et al. 2018). However, little is known about the effect of brand betrayal on the responses of consumers with strong self-brand connection during a brand transgression, especially after the brand propounds a future personalized service or product during the recovery process (after making a sincere apology and handling consumer complaint). *What type of psychological stress is experienced by these consumers during a brand transgression? How will they evaluate and respond to a betraying brand that reflects their self-concept if a future personalized service or product is offered them during a brand recovery process?*

Study 1 (N = 630) used a 3 (poor customer experience: minor failure vs. severe failure vs. brand betrayal) × 2 (personal information: request vs. control) between-subjects experimental design. The negative feeling of self-worth, consumer self-disclosure, and perceived attractiveness of a personalized offering were included as the key consumer responses. The results of Table 1 revealed successful manipulations. Participants in the brand betrayal condition (M = 4.14) indicated higher negative feelings of self-worth than participants in the minor failure (M = 3.39, $p < .001$) and severe failure conditions (M = 3.77, $p = .016$). Participants in the brand betrayal condition (M = -0.91) were more likely to disclose their personal information in exchange for future personalized offering than participants in the severe failure condition (M = -1.45, $p = .017$). Further, they perceived the personalized offering as more attractive ($M_{request}$ = 5.54 vs. $M_{control}$ = 5.12, $p = .022$) when the brand representative had requested (vs. did not request) additional personal information before the personalized offering. However, no differences arose in the perceived attractiveness among participants in the minor failure ($p = .381$) and severe failure ($p = .068$) conditions.

In study 2 (N = 500), we manipulated the degree of consumer anger in two opposite outcomes (a fortunate ending vs. an unfortunate ending). This design served to investigate whether consumer anger is a better predictor of consumer self-disclosure, rather than brand betrayal. As our conceptual framework is motivated by cognitive dissonance theory (Aronson 1968), betrayed consumers with a strong self-brand connection should maintain their favorable attitude toward a betraying brand to defend the brand after a brand transgression. Thus, we explored the consumers' evaluation of brand attitude in four different timelines, including before brand transgression (T1), after brand transgression (T2), after consumer self-disclosure (T3), and after the brand's personalized offering (T4). Although participants in the unfortunate ending experienced a higher degree of frustration-centric anger ($M_{unfortunate}$ = 5.62 vs. $M_{fortunate}$ = 5.33, $p = .037$) and indignation-centric anger ($M_{unfortunate}$ = 4.66 vs. $M_{fortunate}$ = 4.36, $p = .038$) than participants in the fortunate ending, the consumer anger does not serve to predict consumers' experience of low and high degrees of brand betrayal ($p = .203$), and no significant differences arose in consumer self-disclosure ($p = .169$).

A series of regression model analysis was conducted by using the self-brand connection as a moderating variable and a continuous brand betrayal measure as a predictor of the brand attitude in four different timelines, suggesting significant differences in the moderation effect. The results revealed that the participants with strong (weak) self-brand connection and a high degree of brand betrayal held positive (negative) attitudes toward the betraying brand during the brand transgression and brand recovery process. We further conducted a moderated mediation model (Hayes 2013, model 7). The conditional indirect effect measured through the consumer self-disclosure index was significant when the participants hold strong self-brand connection ($b = .28$, $p < .001$), but not with a weak self-brand connection ($p = .144$). Remarkably, the direct relationship for brand betrayal on perceived attractiveness of the offering changed to an insignificant effect after including the consumer self-disclosure index in the model ($p = .799$). The implication here is that betrayed consumers would perceive a personalized offering more attractive if they hold a strong self-brand connection and are willing to disclose personal information to the brand representative. Otherwise, a higher degree of brand betrayal would not lead to betrayed consumers to perceive the personalized offering as more attractive.

Study 3 (N = 484) was conducted to minimize cognitive dissonance by decreasing negative feelings of self-worth (i.e., self-threat) via a self-affirmation task. The findings revealed that consumers with strong self-brand connection are less likely to experience both brand betrayal and negative feelings of self-worth when they are affirmed before a brand transgression; subsequently, they hold unfavorable brand attitude and are less likely to disclose personal information to a betraying brand in exchange for personalized offerings.

This research demonstrates counterintuitive evidence that during the recovery process (after making a sincere apology and handling consumer complaint), highly betrayed consumers are more likely to disclose personal information (e.g., education, job title, workplace, ethnic group, personal interests, favorable and unfavorable brands, lifestyles, and future traveling plans) to a brand representative in exchange for a future personalized offering. Betrayed consumers with strong self-brand connection may defend a betraying brand as to avoid a threat to the self, a finding that is consistent with previous studies (Angle and Forehand 2016; Cheng et al. 2012); they tend to reduce their cognitive dissonance by holding a belief that the betraying brand will serve them better in the future—by rationalizing the betraying brand to be a favorable brand—even if they feel dissatisfied with the brand after a brand transgression. Further, they perceive the offering as more attractive if the brand has requested additional personal information from them. Importantly, the act of consumer self-disclosure is positively (negatively) related to a rise in the degree of brand betrayal (failure severity). For these reasons, marketing scholars are not advised to generalize the effect of brand betrayal by referring to the service failure literature. Lastly, the consumer self-disclosure index can be an alternative to brand relationship measures in predicting consumers' attitude and behavioral intention after a brand transgression.

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When in Doubt, Buy American!: Extreme Innovations Spur Ethnocentric Consumption

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EXTENDED ABSTRACT

New products often challenge consumers' existing beliefs about a product concept. For example, Heinz's purple ketchup violated consumers' expectations, given that people have only ever known ketchup to be red and the color red relates to schematic expectations for the primary ingredient in ketchup. The consequences of violating expectations is well-documented. Schema congruity literature suggests that when a new product is extremely incongruent with expectations, people often struggle to make sense of it (Mandler, 1982; Meyers-Levy & Tybout, 1989). This tends to evoke anxiety, which often results in unfavorable product evaluations (Mandler, 1982; Noseworthy et al. 2014). Although scholars have consistently documented the negative impact of extreme incongruity on product evaluations (Jhang et al., 2012; Meyers-Levy & Tybout 1989; Peracchio & Tybout, 1996), the current research focuses on how extremely incongruent products may be spurring consumption in previously unanticipated ways.

We base our predictions on the concept of *fluid compensation*, which suggests that people often treat schemas as functionally interchangeable, such that affirming one schema (e.g., cultural values) may allow consumers to cope with the anxiety that stems from expectancy violations in an unrelated schema (e.g., a visual anomaly; Heine et al., 2006; Randles et al., 2011). Fluid compensation is especially relevant for marketers, considering evidence that people often compensate by affirming ethnocentrism (Proulx & Heine, 2008). Ethnocentrism is a belief system in which people show deferential preference for their cultural in-group (Sumner, 1906). Consumers can express ethnocentrism through a variety of consumption activities, ranging from preferring domestic products (Wall & Heslop, 1986), to choosing locally-themed brands (Shepherd, Chatrand, & Fitzsimons, 2015), to purchasing culturally branded merchandise (Coonfield & Huxford, 2009).

In bridging the schema congruity and fluid compensation literatures, we explore the intriguing possibility that marketers engaging in extreme product incongruity may inadvertently be spurring ethnocentric preference. Furthermore, we explore this phenomenon through an affective mechanism common to both literatures: anxiety. Thus, we hypothesize that being exposed to an extremely incongruent (vs. congruent) product will elevate state anxiety, which in turn, will elevate ethnocentric preference in unrelated consumption domains.

Study 1 (N=200) tested these predictions using a cross-sectional sample of American and British participants. The study consisted of a four condition 2 (product congruity: congruent vs. extreme incongruity) × 2 (participant nationality: UK vs. US) between-subjects factorial design. In the first part of the study, participants evaluated a smartphone design that was either congruent (i.e. a rectangular phone) or extremely incongruent (i.e. a flexible phone) with the category. Afterwards, participants were given an opportunity to affirm their ethnocentric preference. Specifically, participants moved on to an ostensibly unrelated survey, where they were asked to examine two bottle design alternatives, and select the one they preferred. The alternatives included a bottle which depicted US imagery (i.e., US-Themed) and a bottle which depicted UK imagery (i.e., UK-Themed). Consistent with our theorizing, both American and British participants exhibited heightened levels of state anxiety after evaluating the extremely incongruent (vs. congruent) smartphone, and became more likely to select the bottle alternative that was consistent with their nationality (+24% and +40% respectively, $ps < .05$).

Study 2 (N=218) tested the mechanism using a classic misattribution task adapted from fluid compensation literature (cf. Proulx & Heine, 2008). Specifically, given that the tension that arises from expectancy violations elevates ethnocentric preference, consumers should no longer exhibit elevated ethnocentric preference if they attribute this tension to another source. We tested this possibility in a 2 (product congruity: congruent vs. extreme incongruity) × 2 (arousal misattribution: yes vs. no) between-subjects factorial design. In the beginning of the study, participants were asked to put on the headsets attached to their computer, which they learned was emitting a high frequency sound that was imperceptible to them on a conscious level. This set the foundation of our misattribution manipulation. Participants learned that this sound either led to increased heart rate and mild anxiety (misattribution condition) or had no physiological impact (no misattribution condition). Participants were then asked to evaluate a running shoe design, which was either congruent or extremely incongruent with the category. Afterwards, all participants moved on to an ostensibly unrelated survey, where they rated their preference for several items. Crucially, all items included Canadian imagery, which allowed consumers to affirm ethnocentric preference (cf., Cutright et al., 2011). The results confirmed that although being exposed to the extremely incongruent (vs. congruent) shoe elevated state anxiety, this led to heightened ethnocentric preference only in the no misattribution condition (95% CI: .02; .38), but not when participants attributed their anxiety to the high frequency sound (i.e., misattribution condition; 95% CI: –.39; .01).

Study 3 (N=200) rounded out our inquiry by further exploring the mechanism through a classic moderator from schema congruity literature. Specifically, prior research suggests that that putting consumers in a relaxed state dampens the anxiety response to extreme incongruity (Noseworthy et al. 2014). Thus, if consumers compensate to cope with the anxiety that stems from extreme incongruity, putting them in a relaxed state should eliminate compensatory preference. The study consisted of a 2 (product congruity: congruent vs. extremely incongruent) × 2 (aroused state: low arousal vs. control) between-subjects factorial design. The results confirmed that in the control condition, participants exhibited heightened state anxiety when they evaluated an extremely incongruent (vs. congruent) soft drink bottle, which elevated ethnocentric preference (95% CI: .03; .44). Critically, in line with our expectations, putting participants in a relaxed state eliminated this effect (95% CI: −.01; .18).

In sum, three studies confirmed that extremely incongruent products, which are inherently difficult to make sense of, can cause consumers to affirm ethnocentric preference in unrelated domains. We demonstrated the robustness of this effect across numerous nationalities and multiple means of testing for ethnocentric preference. Finally, we confirmed that these compensatory effects are the result of elevated state anxiety, using theoretically relevant moderators from both fluid compensation (s2) and schema congruity literatures (s3). These results suggest that marketing practitioners need to be wary of the consequences of promoting extremely incongruent products, which may inadvertently be spurring ethnocentric preference.

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The Buzz Behind 'the Buzz' Matters: Tense and Energetic Arousal as Separate Motivations for Word of Mouth

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EXTENDED ABSTRACT

The psychological arousal manifest at a consumer experience has been shown to be a consistent and powerful antecedent to word of mouth (i.e., WOM; for a review, see Berger 2014). That is, the more arousal a product or experience elicits, the more likely that person is to talk about it (e.g., Berger and Milkman 2012). But, for as great as arousal's impact is on WOM, a critical question remains unanswered: why does arousal produce WOM? To address this, the present research introduces a novel perspective on arousal research, subsequently providing an empirically supported, motivational theory for the arousal-WOM relationship.

In the prior research on WOM, arousal has typically been treated as a unidimensional state of mind (e.g., for a discussion, see Fan, Chang, and Wegener 2015); however, we introduce a new conceptualization that examines arousal as two separate types, energetic and tense (Gold et al. 1995; Kuppens et al. 2013; Schimmack and Rainer 2002; Thayer 1989). High energetic arousal, elicited in response to positive experiences, is characterized by feelings of alertness and excitement (vs. low energetic arousal, characterized by tiredness and sleepiness). High tense arousal, elicited in response to negative experiences, is characterized by feelings of anxiety and restlessness (vs. low tense arousal, characterized by calmness and peace; Thayer 1989; 2012).

Under a unidimensional approach, arousal was described only as an aversive state consumers would be motivated to reduce (Hebb 1955). However, under our theorizing we propose consumers are generally motivated to maintain or increase their energetic arousal (an intrinsically pleasant state) through positive WOM, whereas they are motivated to reduce or alleviate their tense arousal (an intrinsically unpleasant state) through negative WOM—a prediction difficult to make under the previous, unidimensional perspective of arousal. With this framework, we also provide the first evidence on how a WOM-recipient's response can influence the WOM-source's arousal state. Specifically, we examine the kinds of responses (i.e., energizing vs. calming) that consumers desire, and we examine how failing to receive this desired feedback influences subsequent arousal changes.

In Study 1a, participants received detailed instructions for a role-playing scenario, where they pictured themselves boarding a commercial flight that resulted in either a seating upgrade (i.e., a positive consumer experience) or a seating downgrade (i.e., a negative consumer experience). Afterward, participants self-reported both their energetic and tense arousal in response to the seating change (Time 1 arousal). Following a brief delay, participants imagined they had shared about their seating change with a friend and reported their arousal again (Time 2 arousal). Comparing Time 1 to Time 2 arousal, we see that those in the positive consumer experience report increased energetic arousal but no differences on tense arousal. In the negative consumer experience, participants report decreased tense arousal but no differences on energetic arousal. As a follow-up, Study 1b had participants imagine themselves in the same airplane scenario; however, after imagining that they shared about their positive or negative experience, they then described a response they would desire from a friend. Later, we had two independent coders evaluate these "desired responses" on how they would affect one's

energetic and tense arousal. Comparing these scores against the midpoint (which represented no change), we see that following positive WOM, consumers desire responses that increase their energetic arousal, whereas following negative WOM, they desire responses that reduce their tense arousal.

In Studies 2 and 3, we compare arousal changes between those who are able to engage in WOM and those who are unable. In Study 2, we return to the airplane scenario, where we vary whether consumers are versus are not able to engage in a texting simulation about their airplane experience. In Study 3, we test our theory with actual behavior, where we first had participants describe an upcoming positive or negative event and then self-report their energetic and tense arousal. Subsequently, participants were instructed to actually text their friend about this event, and after a predetermined time delay, we had them check to see if they received a response. For both those who had and those who hadn't (about equal halves of the sample), they self-report their arousal levels again. In both studies, we see that engaging in WOM for positive events increases or maintains one's energetic arousal, whereas not engaging in WOM leads to significantly lower energetic arousal. In contrast, in response to negative events, we see that tense arousal decreases whether you were or were not able to engage in WOM; however, that decline is significantly greater when one is actually able to engage in it.

In our final studies (4 and 5), we test the influence that a WOM-recipient's response has on the WOM-source's arousal levels. Here, we compare desired versus undesired responses (i.e., responses signaling disinterest; Reis et al. 2010) on both arousal types following either positive or negative WOM. In Study 4, we test this question in the airplane scenario described earlier, whereas in Study 5, we use a computer confederate to get at actual WOM behavior, where participants believe they are ostensibly interacting with a peer. In both studies, we find that receiving a desired (vs. undesired) response to one's positive WOM leads to higher levels of energetic arousal. On the other hand, receiving a desired (vs. undesired) response to one's negative WOM leads to lower levels of tense arousal.

Across all of our studies, then, we provide convergent evidence for our theoretical model explaining the mechanism behind one of WOM's most powerful antecedents. In doing so, we introduce to the consumer literature a novel distinction between energetic and tense arousal that allows for reinterpreting past research as well as generating new predictions. Moreover, in developing this theoretical advance, we provide two novel methodologies for studying WOM in the laboratory—as most previous WOM studies have employed solely hypothetical scenarios. Finally, we provide the first insight into how the WOM-recipient's response can influence the WOM-source's arousal levels, providing practical advice for marketers as well as generating ideas for future research into the WOM-arousal relationship.

The Enjoy-Able Effect: Enjoyment Inflates Self-Evaluations of Ability

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EXTENDED ABSTRACT

Enjoyment stands at the root of the consumer experience, and much research has explored factors that affect enjoyment of products and experiences (Alba and Williams 2013). In addition to being an output of the consumer experience, might consumers' level of enjoyment also serve as an input for their perceptions of their personal qualities? In this research, we demonstrate that consumers' enjoyment of an activity inflates their self-evaluations of ability in the associated domain—what we label "the enjoy-able effect." We propose that this effect occurs because consumers hold a lay theory about the relationship between enjoyment and ability, stemming from an intuitive connection between the two constructs.

Prior research has shown that demonstrating skill/knowledge is inherently enjoyable (Deci and Ryan 2000; Csíkszentmihályi et al. 2005). In contrast to this prior work, however, we show that the reverse causal relationship holds: enjoyment increases self-evaluations of ability. In documenting this relationship, we account for several alternative explanations and show how this effect can influence product choice (i.e., consumers want to purchase more expert-targeted products for activities they find more enjoyable). Thus, in sum, this work contributes to the literatures on enjoyment, self-evaluations of ability, and consumer lay theories.

In study 1, participants first identified various plants in a multiple-choice activity. Afterwards, they recorded three thoughts about the activity. Ostensibly based on these thoughts, participants were randomly told that they either enjoyed the task more (high perceived enjoyment), less (low perceived enjoyment), or an average amount (average perceived enjoyment) compared to other survey participants. As expected, participants in the high relative enjoyment condition (M=60.88) placed themselves in a higher percentile in terms of their knowledge about plants (1st-99th percentile; Kruger and Dunning 1999) compared to those in the average (M=52.91; t(169)=2.03, p=.044) and low relative enjoyment conditions (M=45.28, t(169)=4.04, p<.001). This was true only for the relevant domain and not for reported knowledge about other subjects, ruling out an attribute halo effect. Importantly, the actual number of correct answers (i.e., actual knowledge) did not differ across conditions (all p > .202).

In study 2 participants played a "Bubble Shooter" game as part of a 2(Relative Enjoyment: high or low) × 2(Task Ease Feedback: present or absent) between-subjects design. Afterwards, we manipulated their relative enjoyment as in study 1. Additionally, half of the participants received feedback which stated that they ostensibly found the game just as easy as other players. If high perceived enjoyment only increases consumers' self-evaluations of ability by making them believe a task was easy, then telling these individuals that the task was no easier for them than others should eliminate any effect of the relative enjoyment manipulation. However, only a main effect of the relative enjoyment factor emerged on the percentile-based self-perceived skill measure (Mhigh_enjoyment=57.73 vs. Mlow_enjoyment=51.39; F(1, 349)=8.63, p=.004). Thus, consumers' beliefs about how easy the task was for themselves does not explain the relationship between enjoyment and self-evaluations of ability.

Study 3 provides process evidence that the observed effect is driven by consumers' lay theory about the relationship between enjoyment and ability. We posit that consumers have likely learned over time that demonstrating knowledge or ability is enjoyable (e.g., seeing that experts at tasks, such as professional athletes, usually enjoy performing them). Consequently, we expect participants to overgeneralize the causal direction of this relationship as they do with other relationships (Sackett et al., 2010). In testing this, participants first completed an implicit association test (IAT; Greenwald, Nosek, and Banaji 2003), which revealed that participants were faster to respond during congruent trials (i.e., when "high ability" and "enjoyable" were paired together as a category label; M=977.67 ms) versus incongruent trials (i.e., when "high ability" and "unenjoyable" were paired together as a category label; M=1053.00 ms; MD-score=0.17; t(85)=3.68, p<.001), indicating an intrinsic relationship between ability and enjoyment. Participants then completed the same activity and relative enjoyment manipulation as in study 1. Next, we regressed the skill percentile measure on the relative enjoyment factor, the calculated IAT score, and their interaction. A significant interaction emerged (b=12.43, SE=5.21, t(82)=2.38, p=.019). Among participants who demonstrated the implicit association to at least a moderate degree (56% of participants), those in the high relative enjoyment condition placed themselves in a significantly greater percentile than those in the low relative enjoyment condition (p < .05). This difference was attenuated among participants who did not demonstrate the implicit association.

In study 4, we look at consumers' self-reported actual enjoyment, rather than manipulate perceived enjoyment, and examine our effect across 100 activities. Using three non-overlapping, nationally representative samples, we have participants rate (1) how enjoyable each activity is, (2) their perceived ability at the activity, or (3) their choice of products to use for engaging in the activity. Through this approach, we examine the relationship between our variables as a function of the activity, rather than the participant (i.e., we use each activity's averaged enjoyment to predict each activity's averaged perceived ability and product choice), mitigating the possibility that within-participant factors could have biased these results. Here, we find that activities consumers rank to be more enjoyable also tend to be activities where consumers report higher self-evaluations of ability (b=4.28, SE=1.30; t(96)=3.29, p=.001). Moreover, activities ranked to be more enjoyable also tend to be ones where consumers prefer more expert-targeted products (b=.07, SE=03; t(96)=2.77, p=.007). Importantly, enjoyment's effect on product choice is mediated through higher self-evaluations of ability (b=.12, SE=.03, 95%CI:[.071, .169]). In other words, the most enjoyable tasks are also those for which consumers are most likely to prefer products targeted toward experts as a function of consumers' inflated self-evaluations of their ability.

Taken together, this research demonstrates consistent evidence for the enjoy-able effect, whereby consumers' enjoyment of an activity inflates their self-evaluations of ability in the associated domain, which can then influence their product choice. This work is among the first to demonstrate that enjoyment can serve as a metacognitive input for consumers' self-perceptions, and implications of these findings extend across numerous domains and have significant implications for consumer welfare, gamification, and education.

Drawings as a Method to Assess Beauty Ideals and Stereotypes in Children

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EXTENDED ABSTRACT

Prior studies have used research methods such as content analysis (Northup and Liebler 2010), focus groups (Hargreaves and Tiggemann 2006), interviews (Slater and Tiggemann 2010), surveys (Kantanista et al. 2015), and experimental designs (Rennels and Langlois 2014) to investigate beauty ideals and stereotypes in children. Further, researchers who have examined beauty ideals and stereotypes have mostly used either pre-schoolers or high schoolers as their participants. However, an age group that has not received much attention within the extant literature are primary school children. Thus, this paper has not only addressed this gap in the extant literature by using primary school aged children as participants, but this paper also introduces a novel method, i.e. the drawing technique within the consumer behaviour literature to explore beauty ideals and stereotypes in boys and girls.

Psychologists argue that the drawing technique is an ideal method to capture the thoughts of young children who find it hard to express their opinions verbally (Cherney et al. 2006). In other research methods such as experiments or surveys, it is the responsibility of the researcher to decide what their dependent variables are going to be. Similarly, while conducting focus groups or interviews it is the researcher's job to determine what questions the participants are going to be answering. The drawing method, on the other hand, gives participants a chance to define the dependent variables themselves by using their vast imagination. In other words, the drawing technique is a more participant-driven method rather than being researcher-driven.

The following steps were implemented while undertaking this research. First, the required permissions were obtained from school authorities, parents, and the children themselves before the commencement of the study. Second, the participants were gathered in a classroom where they were made to sit comfortably. Third, the participants were given a sheet of paper which was divided into two equal halves using a thick black line. On the left-hand side of the paper, the participants were asked to draw a picture of a good-looking child and on the right-hand side of the paper, the participants were asked to draw a picture of a less good-looking child. Lastly, after the drawing activity was completed, the participants were asked to describe the pictures that they had drawn. A total of 222 children (55% females, M_{age} = 8.99) took part in this research. Most participants belonged to middle-income households. The children were given a box of colours as a token of appreciation for their participation in the study.

The data was coded and analysed using a thematic content analysis approach (Braun and Clarke 2006). The findings obtained from the drawing data revealed that children associated positive attributes with good looking individuals and the opposite was found regarding the less good-looking person. The children's drawings showed that physical features such as thinness (muscles), narrow waist (broad shoulders), blonde hair, defined eyes, and a smiling face was associated with attractive individuals. On the other hand, a fat body and undefined facial features were used to depict unattractive children. The novel finding obtained from this research is the links children made between beauty and material possessions. The above relationship was very evident in the pictures drawn. For example, both girls and boys, in addition to linking grooming products with the good-looking person, also associated things such as big houses, toys, cars, video games, iPads, and computers with physical attractiveness. This paper also revealed differences in adult and children's perception of beauty and associated stereotypes. For example, prior research has shown that blonde women in western societies are often stereotyped as being dumb and incompetent (Zagorsky 2016). However, the present study indicated that children perceived good-looking girls who are blonde to be smart and intelligent. The above findings contradict adult perceptions of blonde women.

As noted earlier, the primary objective of this paper was to introduce drawings as a novel method to explore beauty ideals and stereotypes in children. This paper contributes to the marketing literature by showing explicit links between beauty and material possessions. While prior scholars have implicitly shown relationships between attractiveness and owning expensive things (Banerjee and Dittmar 2008), the pictures drawn by children brought out the above links more explicitly. Therefore, drawing can be used alongside other research methods to understand beauty-material possession associations in children. In addition, the drawing method revealed that children's perceptions of beauty were very similar to that of adults. These findings may imply that like adults, children might also be influenced by the body ideals and stereotypes presented in the mass media. Future studies can employ the drawing method to investigate mass media impact on children's perceptions of physical attractiveness.

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Good on Paper: How the Medium of Action Influences Self-Control

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EXTENDED ABSTRACT

Digital devices such as computers, tablets, and smart phones are increasingly pervasive in consumers' lives. Many forms of consumption and decisions that used to occur solely on paper now also take place on these devices: choosing what to eat at a restaurant, reading a book, taking a standardized test, or deciding how much to donate to charity. How does using a digital device instead of paper influence these consumption behaviors, particularly for decisions requiring self-control (i.e., the suppression of impulses and undesirable habits; Baumeister 2002; Eisenberg, Spinrad, Fabes, Thompson, and Murphy 2004)?

Although the use of paper and digital devices is common in everyday consumption contexts, research comparing the behavioral consequences of these two media of action is rare. In the present article, we draw from neuromarketing studies (United States Postal Service Report 2015) and from research on self-signaling (Dhar and Wertenbroch 2012; Prelec and Bodner 2003; Savary, Goldsmith, and Dhar 2015; Touré-Tillery and Fishbach 2015) and self-control (Baumeister, Heatherton, and Tice 1994) to explore the effect of using paper (vs. a digital device) as a medium of action on self-control.

Theoretical Development

Medium Matters

Digital devices come in many shapes and sizes, with or without certain features such as touch interfaces. Research shows these features influence consumers' judgment, decision-making, and communication patterns (Oviatt et al. 2006). For example, Ghose, Goldfarb, and Han (2013) find consumers are more likely to buy the most popular products on mobile devices relative to tablets or personal computers, because the smaller size of mobile devices increases search costs, which in turn discourage the acquisition of new or unpopular products. Stephen and Grewal (2015) show consumers are more likely to comply with positive reviews they know originated from mobile (vs. non-mobile) devices, because the greater perceived effort of writing from such devices leads consumers to believe such reviews are more indicative of the reviewer's true feelings. Findings on the effect of touchscreens suggest devices with touch (vs. no touch or mouse) interfaces elicit stronger emotional/subjective—lower rational/objective—responses (Brasel and Gips 2015; Chung 2015) and a sense of connection with the device (Hein, O'Donohoe, and Ryan 2011), influencing judgment and decision-making. For example, Shen, Zhang, and Krishna (2016) show consumers are more likely to choose hedonic foods (e.g., a slice of cheesecake) over utilitarian ones (e.g., a bowl of fruit salad) when using devices with touch (vs. no touch or mouse) interface, due to the ease of mentally simulating the act of choosing this option.

Although a fair amount of research has been devoted to comparing the effect of different features of digital devices on consumers' judgments and choices, substantially fewer studies have investigated the effect of using digital devices relative to using paper. Furthermore, this line of research has tended to focus on how people respond to information presented on these two types of media rather than focus on how people preform on these two types of media.

Good on paper

Neuromarketing studies (Millward Brown Study 2009; Royal Mail Study, 2015; United States Postal Service Report 2015) on comparison information presented on paper and digital device suggest that :1) paper material elicits enhanced emotional processing and emotionally vivid memories; 2) participants perceived paper (vs. digital) materials as more "real," meaningful, and belonging in space, which might further increase the connection between paper materials and memory; 3) when participants were viewing paper (vs. digital) material, they had greater tendency to focus on internal emotional responses to the external stimuli and relating information to one's own thoughts, feelings, and autobiographical memories (see also Buckner et al. 2008; Spreng, Mar, and Kim 2009).

Building on these findings, we propose that if what consumers *see* on paper feels more real than what they see on a digital device, then what they *do* on paper (vs. a digital device) will also seem more real. Thus, consumers will view the decisions, choices, and actions they perform on paper as more consequential for inferences about themselves than the decisions, choices, and actions they perform on digital devices. Indeed, people often learn about themselves by observing their own behaviors and making inferences from these behaviors about their own nature and characteristics (Bem 1972). We propose this self-inferential process will carry more weight for actions that seem more real (i.e., actions on paper) than for those that seem less real (i.e., actions on digital devices), such that consumers will consider the actions they perform on paper (vs. digital device) as more indicative of the type of person they are (i.e., more self-diagnostic).

Research shows that when people consider their actions diagnostic of who they are, they are more likely to engage in behaviors they consider virtuous—that is, consistent with important standards—in an effort to maintain a positive self-concept (Bryan, Walton, Rogers, and Dweck 2011; Prelec and Bodner 2003; Touré-Tillery and Fishbach 2012, 2015). Furthermore, people typically interpret the exercise of self-control and the ensuing virtuous behavior as a sign that they possess desirable characteristics such as willpower, health-consciousness, goodness, competence, and so on (Bodner and Prelec 1996; Dhar and Wertenbroch 2012; Gneezy, Gneezy, Riener, and Nelson 2012; Mazar, Amir, and Ariely 2008). Thus, we propose that because actions performed on paper (vs. a digital device) are deemed more self-diagnostic, consumers will be more likely to exercise self-control for actions they performed on paper than for those they perform on a digital device.

Study 1: Diagnostic on Paper

Study 1 examined the effect of the medium of action on perceptions of self-diagnosticity.

The study employed a 2 (medium of action: paper vs. digital device) between-subjects design. 140 students were approached by research assistants and successfully complete either a paper or iPad-bases survey. Participants read that the survey was about consumer preferences, and indicated the option they would be most likely to choose from nine pairs of product-, brand- or activity-options, which actually was a filler task and was a relatively neutral action on their respective media. Next, we assessed participants' perceptions of the self-diagnosticity of their actions (i.e., prior choices), using four items adapted from Touré-Tillery and Light (2018). An independent *t*-test revealed that participants who completed the survey on paper perceived their actions as more self-diagnostic ($M = 5.20$, $SD = .97$)

than participants who completed the survey on a tablet ($M = 4.86$, $SD = 1.02$, $t(138) = 2.02$, $p = .045$, $d = .34$).

This study demonstrated the effect of the medium of action on perceptions of self-diagnosticity.

Study 2: Are You Creative? Internalizing Feedback about Actions Performed on Paper

In study 2, we further tested the effect of the medium of action on perceptions of self-diagnosticity by examining whether feedback about actions performed on paper (vs. a digital device) will have a greater influence on people's self-concept.

The study employed a 2 (medium of action: paper vs. digital device) × 2 (feedback type: positive vs. negative) between-subjects design. 288 students came into the lab to complete a short paper- or computer-based study. Participants firstly were asked to list as many possible uses for a brick as they can in three minutes in the "Brick Task" (see Torrance 1974; Mehta et al. 2012). Then participants unexpectedly received positive or negative feedback on their performance and informed that the purpose of the Brick Task as a measure of creativity. Then, to measure the extent to which the feedback influenced their self-concept, we asked participants to rate themselves along creativity (revised from Mehta and Zhu 2015).

An ANOVA revealed no main effect of the medium of action ($F(1, 281) = .02$, $p = .887$), a significant main effect of feedback type ($F(1, 281) = 194.93$, $p < .001$), and, most importantly a significant interaction of the medium of action by feedback type ($F(1, 281) = 9.52$, $p = .002$). Planned contrasts showed that in the positive-feedback condition, participants rated themselves as more creative when they had completed the task on paper ($M = 6.70$, $SD = 1.14$) than when they had completed the task on a computer ($M = 6.16$, $SD = 1.69$; $t(281) = 2.33$, $p = .021$). By contrast, in the negative-feedback condition, participants rated themselves as less creative when they had completed the task on paper ($M = 3.86$, $SD = 1.25$) than when they had completed the task on a computer ($M = 4.35$, $SD = 1.44$; $t(281) = -2.04$, $p = .042$).

Study 2 shows feedback about an action performed on paper had a greater effect on participants' self-concept than the same feedback about an action performed on a computer, providing further evidence for differential effects of paper and digital devices on perceptions of self-diagnosticity.

Study 3: Prosocial on Paper

In study 3, we investigated the effect of the medium of action (paper vs. digital device) on self-control in the context of charitable giving.

In study 3a, 192 students were approached by research assistants in the campus to attend a paper- or iPad-based survey. The study design and procedure was similar to study 1a. participants read a charitable appeal soliciting volunteering time for a local Children's Welfare Institute and indicated whether they would like to volunteer for the organization (yes/ no), and to strengthen this behavioral measure, we asked those who said "Yes" to leave their cellphone numbers so that the Children's Welfare Institute could contact them directly.

A logistic regression analysis showed that a greater proportion of participants who expressed their intentions on paper were willing to volunteer (34.40%) relative to those who expressed their intentions on a tablet (20.80%; $\beta = .19$; $\chi^2(1) = 4.33$, $p = .037$).

In study 3b, 199 adults from a different culture background were approached in the downtown area of a large city in the United States to participants in the study, the designer and procedure of which was identical with study 3a with one exception: participants were asked

to indicate their donation intention by leaving their email address. A logistic regression analysis also showed that a greater proportion of participants who expressed their intentions on paper were willing to donate (21.10%) relative to those who expressed their intention on a tablet (7.30%; $\beta = .33$; $\chi^2(1) = 7.35$, $p = .007$).

Using participants from different countries and cultures, the results of study 3 provide initial support for our hypothesis that people will be more likely to exercise self-control for actions performed on paper.

Study 4: Dogged on Paper

Study 4 investigated the effect of the medium of action on self-control in the context of academic performance. 144 students were recruited to attend a paper or computer-based study. Participants read that they would be completing a "pattern-recognition test" designed to test their ability to recognize patterns. To activate a performance goal for all participants, the instructions stated that "performance on this task provides a reliable measure of math and verbal ability" and that "pattern recognition is also highly correlated with general intelligence". The task consisted of using a specific set of rules to decode a scrambled-word paragraph and reveal the true English meaning of each word and sentence.

Results showed participants who performed the task on paper decoded more words ($M = 2.69$, $SD = .68$) and more letters correctly ($M = 4.19$, $SD = .80$) than participants who completed the task on the computer (For correct words: $M = 2.29$, $SD = .92$, log-transformed: $t(139) = 2.99$, $p = .003$; for correct letters: $M = 3.69$, $SD = 1.13$, log-transformed: $t(139) = 3.01$, $p = .003$). In addition, results also revealed that participants who completed the survey on paper decoded more letters, including correct and incorrect responses ($M = 4.26$, $SD = .74$), than participants who completed the survey on the computer ($M = 3.89$, $SD = .89$, log-transformed: $t(139) = 2.61$, $p = .010$).

Taken together, the results of study 4 provide further support for our hypothesis about the effect of the medium of action on self-control. We find that participants pursuing an important (i.e, self-relevant) goal on paper performed better and were more persistent than those pursuing the goal on a digital device.

Study 5: Moderation by Target of Choice

Choices made for others are reflective of the chooser's beliefs about others (rather than about the self), and thus such choices should be seen as less representative (non-diagnostic) of the chooser's personal preferences than choices made for the self. Therefore, we expect the effect of the medium of action on self-control to occur only when consumers are making personal choices that can reflect their own preferences and characteristics (i.e., choices that can be self-diagnostic), and not when consumers are making choices for others (i.e., non-self-diagnostic choices). In this study, we examined this hypothesis.

344 adults were approached to participants this 2 (medium of action: paper vs. digital device) × 2 (target of choice: self vs. other) study. The procedure of this study is similar to that of studies 1, 3a and 3b. Participants reviewed a menu on iPad or a paper and asked to circle the entrée you would be most likely to order for yourself for your next meal [choose for a friend for his or her next meal] depending on which condition they were in. The menu, adapted from Fishbach and Zhang (2009), appeared below these instructions and featured 10 entrées in two separate columns. Participants' choice of entrée constituted our measure of self-control.

A logistic showed no main effect of medium of action ($\chi^2(1) = 1.71$, $p = .198$), or target of choice ($\chi^2(1) = .74$, $p = .391$) but the predicted interaction of medium of action and target of choice emerged

($\chi^2(1) = 5.93$, $p = .015$). Planned contrasts showed that when participants chose for themselves, a greater proportion made a healthy food choice on paper (70.21%) than on the tablet (34.62%, $\chi^2(1) = 20.75$, $p < .001$). However, when participants chose for another person, there was no significant difference in food choices between the paper (51.09%) and tablet conditions (41.25%, $\chi^2(1) = 1.66$, $p = .198$).

Study 5 provided evidence for the role of perceptions of self-diagnosticity on the effect of medium of action on self-control by demonstrating the moderating role of choosing for the self (a more self-diagnostic act) versus for another person (a less self-diagnostic act).

General Discussion

Across six studies, the present research showed that medium of action (paper vs. digital device) would influence consumers' self-diagnosticity, and hence impact self-control.

Our findings extend the existing body of research on how people respond to interactions with different media (digital, physical/paper) and suggests a link between perceptions of self-diagnosticity and psychological distance in general (i.e., hypothetical/real, social, spatial, and temporal), such that actions that are psychologically distant from the self tend to seem less self-diagnostic. Furthermore, the knowledge that people will tend to make choices that are in their best interest on paper (vs. digital devices) has practical implications for marketers, policymakers educators, and managers.

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The Effect of Self-Multiplicity on Compliance with Health Recommendations

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EXTENDED ABSTRACT

In 2016, the World Health Organization (WHO) reported that the top three causes of death and disability worldwide were from preventable diseases: chronic obstructive pulmonary disease, ischemic heart disease, and stroke. A substantial portion of these deaths occur because people do not comply with public health recommendations. Many factors drive this lack of compliance (Batra, Keller, and Strecher 2011; Witte and Allen 2000). In particular, health information can be threatening to the self-concept because such information links one's behaviors to harmful consequences associated with a disease (Murdock and Rajagopal 2017; Sherman, Nelson, and Steele 2000). Consequently, when confronted with health information, people engage in defensive processing in an effort to protect their positive views of themselves (Ditto et al. 1998; Puntoni, Sweldens, and Tavassoli 2011). This reduces compliance with health recommendations among the individuals for whom the issue is most relevant.

Previous research has shown that self-affirmation reduces this tendency to resist threatening information by bolstering the individual's sense of self-integrity or self-worth—that is, their views of themselves as good, worthy and capable individual (Sherman and Cohen 2002; McQueen and Klein 2006; Harris and Epton 2009). This allows people to cope with the threat posed by the health message, and ultimately increases compliance with the recommended actions. In the present research, we investigate how people's mental representation of the structure of their self-concept—specifically, their number of self-aspects—can help overcome defensive processing and increase compliance with health recommendations.

We define "self-multiplicity" as the extent to which people perceive themselves as having many (vs. few) aspects to their lives: people high in self-multiplicity represent their self-concept with more self-aspects than those low in self-multiplicity. This definition is based on previous research which has observed that people vary in their representation of the number of self-aspects they have (Linville 1987; Markus and Cross 1990). Based on previous work showing that multiple identities have benefits for self-esteem and overall psychological well-being (Burton 1998; Seiber 1974), we propose that each self-aspect operates as a potential source of self-worth, such that the more self-aspects one has (i.e., higher self-multiplicity), the more sources of self-worth one should have, and thus the greater one's overall sense of self-worth should be. Further, we propose that by increasing self-worth, self-multiplicity reduces defensive processing, and hence increases compliance with health recommendations. Across six studies, we find support for our hypotheses.

Our first set of experiments provides initial evidence of the positive relationship between self-multiplicity and compliance with health recommendations, operationalized through a general measure of health motivation in experiment 1a, and a compliance with a specific preventive behavior (i.e., getting a flu shot) in experiment 1b. In experiment 1a, 181 American adults were recruited to list the main self-aspects in their life before indicating their tendency to engage in seven preventive health behaviors. Results revealed the predicted positive relationship between these two measures ($\beta = .42$; $t(179) = 6.21$, $p < .001$). In experiment 1b, 161 participants were recruited in the middle of flu season and listed the main self-aspects in their life before indicating if they got a flu shot. We found that as perceived self-multiplicity increased, participants were more likely to have gotten a flu shot ($\beta = .20$; $\chi^2(1) = 4.19$, $p = .041$).

Experiment 2 employed a 2 (self-multiplicity: low vs. high) between-subjects design to test the effect of self-multiplicity on compliance with health recommendations concerning high blood pressure. Participants (N = 146) listed their main self-aspects before receiving false feedback that the number of aspects they listed was relatively low (vs. high). They then read a message about high blood pressure and indicated their intentions to take the recommended preventative steps. We found participants in the high self-multiplicity condition were more willing to comply with the health recommendations ($M = 4.76$, $SD = 1.16$) than participants in the low self-multiplicity condition ($M = 4.26$, $SD = 1.13$, $t(144) = 2.43$, $p = .010$).

Experiment 3 used the same design as experiment 2, but a different manipulation of self-multiplicity: participants either listed two (low-self-multiplicity) or five main aspects (high-self-multiplicity) of their lives. Female participants (N = 130) completed the self-multiplicity manipulation before reading a message about breast cancer and indicating their intentions to take the recommended preventative steps. We found participants who listed five self-aspects were more willing to comply with the health recommendations ($M = 5.38$, $SD = 1.39$) than participants who listed two self-aspects ($M = 4.79$, $SD = 1.77$, $t(128) = 2.13$, $p = .035$).

Experiment 4 employed the same design and manipulation of self-multiplicity as Experiment 3 in order to test the mediating role of self-worth—our proposed mechanism. Participants read a message about skin cancer, indicated their intentions to take preventative steps, and reported their perceived self-worth. Mediation analysis confirmed that the positive effect of self-multiplicity on compliance on health recommendations was mediated by self-worth (b = .07(.04), 95% CI [.01, .17]).

In Experiment 5, we further tested our proposed mechanism by examining the moderating role of self-affirmation. This study employed a 2 (self-affirmation: yes vs. control) × 2 (self-multiplicity: low vs. high) between-subjects design. Female participants (N = 280) first completed a self-affirmation manipulation (writing about a valued life area) or non-affirmation/control manipulation (listing common household objects), before completing the self-multiplicity manipulation used in Experiments 3 and 4. Participants then read the message about breast cancer from Experiment 3 and indicated their intentions to take the recommended preventative steps. We replicate the impact of multiplicity on compliance with health recommendations in the non-affirmation condition ($t(276)=3.67$, $p < 0.001$) but not in the self-affirmation condition ($t(276) = -.79$, $p = .433$).

Taken together, these results suggest perceptions of self-multiplicity have a positive impact on self-worth, and hence on compliance with health recommendations. These findings have theoretical implications for research on decision-making, defensive processing, and the self-concept. On a practical note, these findings suggest policy makers could increase compliance with health recommendations by emphasizing the self-multiplicity of their target audiences.

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Naming Multigenerational AlphaNumeric Brands: Where and What to Increment?

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EXTENDED ABSTRACT

Introduction

The use of alphanumeric brand names (henceforth ABN) is popular for multigenerational technological products (Gunasti and Ross, 2010). Firms typically use sequential names to signal advanced models or versions of the product (Pentium I/II; Samsung S4/S5; Cadillac CTS/DTS). In sequential ABNs, the brand name (Pentium, Samsung, Cadillac) remains constant and firms increment the alphanumeric extension (henceforth AE) to show a progression (Samsung S4/S5; Canon 200D/300D). The increment in AEs could happen for the left character (Canon 200D→300D; Samsung S100→T100) or right character (Samsung S4→S5; Chrysler 200B→200C). Firms use different increment strategies, they can increment number/letter; or they can increment the first/last part of the AE. The objective of this research is to investigate the effect of different increment strategies that firms adopt in incrementing mixed AEs for multigenerational products.

ABNs, AE Increments and Consumer perceptions

Consumers follow 'higher the better' heuristic and rely on ABNs rather than on product attributes to evaluate the product and associate a higher ABN with a better product (Gunasti and Ross, 2010). A similar heuristic is also applied for letters in the ABNs (Kara, Gunasti and Ross, 2015). When comparing numbers individuals use a sequential place value model (Poltrock and Schwartz, 1984). A similar approach is used for ordering roman words, the dictionary order or the alphabetic order of listing also follows an ordering system similar to a place value system for numbers. The discussion above suggests that ordering of both letter and number strings, follows a similar process (place value heuristic). We propose that consumers use a place value approach for alphanumeric characters when evaluating the order and relative magnitude of alphanumeric strings in AEs.

Study 1: Consumer Preference and location of AE increment

Participants (N=59), were randomly assigned to one of the two between subject conditions: letter-first and number-first AE. The participants read about a (hypothetical) 3D printer manufacturer, Zortrax, that had a 3D printer Zortrax B4 (4B). They had to identify the more advanced model from two new launches printers B5/C4 (5B/4C).

In the letter-first condition (B4), participants chose C4 as the advanced model ($\chi2(1)=26.13$, $p<0.05$). On the other hand, in the number-first condition (4B), participants chose 5B (not 4C) as the advanced ($\chi2(1)=15.21$, $p<0.05$) model.

Study 2: Impact on Willingness to Pay

The study investigated the relative impact of increments at the first and the last place of AE on consumer's willingness to pay. Subjects (N=124, 21% female) were randomly allotted to one of the four between-subject conditions 2(Increment location: first /last) x 2(increment type: letter/number). The participants indicated the price premium they were willing to pay for the new model D-2000/C-3000 (3000-C/2000-D) over the current model C-2000 (2000-C) and their perceived product upgrade for the new model.

The ANOVA results indicated significant main effect of place of increment ($F[(1,120)=18.04$, $p<0.05]$, the increments at the first place resulted in higher willingness to pay than at the last place (M_{First-}

$_{place-increment}=22.68\%$, $M_{Last-place-increment=}17.23\%$). The main effect of type of increment and the interaction was statistically insignificant.

Study 3: Generalizing Place Value Heuristic

Participants (N=116, 35% females) took part in a study where they had to compare two alphanumeric strings by choosing '>' (greater than) or '<' (less than). They were randomly allotted to two conditions of letter/number first conditions and each participant compared eighteen pairs of alphanumeric strings. The focus of analysis was on four string pairs, which were such that in each pair, one string was higher than the other in first part and lower in second part (D8 (8D) vs. E7 (7E)). An index was formed by allotting one point for marking the string with a higher first character as 'greater' and zero otherwise. The scores were averaged for each participant. A one sample t-test performed by pooling the data across the two groups suggests that the mean is significantly higher than 0.5 ($M_{Pooled}= 0.66$, $t(115)=5.29$, $p<.0.01$). A between groups comparison suggests that the means for the number-first strings were higher ($M_{Number-first}= 0.73$, $M_{Letter-first}=0.58$, $t(114)=2.58$, $p<.0.05$). The results indicate that when comparing a pair of alphanumeric strings, the subjects' perceptions were primarily dependent on the first character, however, this effect is weaker for letter-first strings.

Study 4: Location of increment - Eye tracking

We used an 'eye tracker' to illustrate the process used by subjects to assess AEs. Subjects (N=14, 65% male) participated in a study on consumer behavior using eye tracking. They rank ordered a set of eight models of a product based on their AEs from oldest to latest. Four AEs were of letter-first format (CR-37/CR-46/DR-28/DR-73) and the other four of the number-first format (57-CR/68-CR/27-DR/63-DR). The subjects spent more time evaluating the first part of the AE (2.68 seconds) than the second part (1.92 seconds). In the letter-first AEs, the difference in time spent on letters and numbers was significant ($Fixation_{Letters}=3.249$ seconds; $Fixation_{Numbers}=1.891$ seconds, p<.05). However, for number-first AEs, the difference was insignificant. Overall, results indicate that more time is spent on first part than on the second part.

Study 5: Generalizability of Place Value Theory

Subjects (N=114, 35% female) participated in a study to evaluate fitness bands. The experimental design was 2(Orientation of Brand name: Horizontal/Vertical) x 2(Increment Location: First/Last). The two way ANOVA with expected price as the dependent variable showed, that as expected only the main effect of the location of increment was significant, with means in the expected direction ($M_{First}=1415.4$, $M_{Last}=1264.1$, $p<0.05$). Similarly, another ANOVA with the perceived product upgrade showed only a significant main effect for location of increment (M_{First} 3.08, $M_{Last}=2.66$, $p<0.05$). A boot strapped mediation analysis shows that perceived product upgrade mediates the relationship between the location of increment and expected price.

General Discussion and Implications

In sequential AEs, the increments at the first place have a stronger effect on consumer's perceptions than that at the last place. This effect is stronger for numeric increments than for letter increments. The consistent finding across five studies using diverse stimuli, methods and measures indicates a support for the place value theory. The study has direct marketing implications.

A Window to the Brand's Soul: How Models' Eyes Affect Consumers' Attitudes

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EXTENDED ABSTRACT

Models' physical appearance is well known to influence consumers' evaluations (Baker and Churchill 1977). A particularly salient feature that affects judgments of physical appearance is the eyes. A model's eyes capture the viewer's attention and influence his impression of the model (Illicic, Baxter, and Kulczynski 2016). The pupil (i.e., the black circle through which light enters the eye) and the iris (i.e., the colored ring around the pupil) are opposing mechanisms, in that dilated and constricted pupils respectively reduce and increase iris exposure. The pupil and iris also convey different information to viewers. For instance, physiological arousal causes pupil dilation, and hence dilated pupils reveal that the person is aroused. In contrast, by exposing more of the iris, constricted pupils can increase perceived attractiveness.

Research in psychophysiology has extensively investigated *what* causes pupils' dilation (Bradley et al. 2008), but surprisingly few studies examined how others' pupil size affects attitudes (Kret 2015). Since eyes are automatically processed when viewing a face, pupil dilation influences observers' perceptions at a very brief exposure (Van Breen, De Dreu, and Kret 2018). Previous research suggests that people with larger pupils are evaluated positively (Hess 1975) and reciprocated more in a trust game (Kret, Fischer, and De Dreu 2015), but those few studies exclusively focused on social interactions and used black-and-white images revealing only the eyes. These stimuli are rarely used in contemporary marketing contexts, where colors are ubiquitous. In fact, virtually nothing is known of how a model's pupil size affects consumers' evaluations of advertisements.

We investigated whether models with constricted (versus dilated) pupils in advertisements affect consumers' attitudes toward the ad. We argue that, because eyes with smaller pupils show more iris color, constricted pupils improve the model's perceived attractiveness and the ad's evaluation. Four experiments reveal that advertisements featuring models with constricted pupils are liked more because constricted pupils enhance the model's perceived attractiveness. Despite finding that consumers' own pupils mimic the model's pupils, our results suggest that pupil size affects evaluations via routes other than physiological contagion. Thus, in advertising, consumers seem to be influenced more by aesthetic properties of the ad rather than by their own physiological reactions.

Study 1, a within-participants lab study ($N = 108$), tested whether models with constricted (versus dilated) pupils are perceived as more physically attractive. We sampled 20 pictures, each with a different female model. We cropped the pictures to focus participants' attention on the eyes. We created two versions of each picture: one in which the model had constricted pupils (10-15% of iris diameter) and one in which the model had dilated pupils (45-50% of iris diameter). The two versions were otherwise identical. We created two different experimental lists, so that each list included the constricted-pupil version of 10 ads and the dilated-pupil version of the other 10 ads (with ads counterbalanced across lists). Results showed that models with constricted pupils were perceived as more physically attractive ($p < .01$, $\eta^2 = .09$).

Study 2 ($N = 100$) tested whether models' pupil size influences consumers' attitudes toward the ad. Study 2 followed the same design as the previous study. We sampled 24 ads, from two different cosmetics brands (Clarins and LaRoche-Posay). We did not crop the pictures, so that participants could see the entire advertisement. We created two versions of each ad: one in which the pupils were constricted (10-25% of iris diameter), and one in which the pupils were dilated (60-75% of iris diameter). Findings showed that ads were liked significantly more when the model had constricted pupils ($p < .001$, $\eta^2 = .17$).

Study 3 examined whether the positive impact of constricted pupils on ad attitudes is driven by the model's perceived physical attractiveness. Given that prior research associated pupil size with trust (Kret et al. 2015), we collected perceived trustworthiness as an additional mediator. Studies 3A ($N = 105$) and 3B ($N = 100$) differ from previous studies only in the models' eye color and brand. Ad attitudes were again more positive when the ad featured models with constricted pupils ($p < .001$, $\eta^2 = .17$). Models with constricted pupils were perceived as more attractive ($p < .001$, $\eta^2 = .32$) and trustworthy ($p < .001$, $\eta^2 = .09$). Results revealed significant indirect (mediating) effects of pupil dilation on ad liking via both attractiveness ($B_{attractiveness} = .17$, 95% CI = .11 to .24) and trustworthiness ($B_{trustworthiness} = .13$, CI = .07 to .20).

Study 4 ($N = 78$) tested whether the effect of constricted pupils on ad attitudes can be explained by pupil mimicry, which is the tendency of one person's pupils to assimilate to another person's observed pupil size (Kret et al. 2015). We replicated the procedures of Study 3A, but included eye tracking to measure participants' pupil size changes. Models with constricted pupils again were perceived as more attractive ($p < .001$, $\eta^2 = .32$) and trustworthy ($p < .05$, $\eta^2 = .11$). Participants' pupils dilated more when exposed to an ad with a dilated-pupil model, providing evidence for pupil mimicry from ads ($p < .001$, $\eta^2 = .10$). Findings reveal significant indirect effects of pupil dilation on ad liking via both attractiveness and trustworthiness ($B_{attractiveness} = .12$, CI = .05 to .20; $B_{trustworthiness} = .14$, CI = .05 to .26), but not via pupil mimicry (CI = -.02 to .03).

In sum, this research clarifies how pupil size affects consumers' attitudes. Although classic research links large pupils with positive judgements (Hess 1975), our data suggest that these findings are not generalizable to marketing contexts such as advertising. Our investigation suggests that constricted pupils enhance the models' perceived attractiveness, and this has positive spill-overs on evaluations of the ad. We further make advancements on the understanding of the mechanism behind the effect of pupil dilation on attitudes. Past studies proposed pupil mimicry as the mechanism behind the impact of pupil size on attitudes (Kret et al. 2015). We instead show that pupil dilation affects consumers' more directly via perceived attractiveness rather than pupil mimicry, whose influence might be context-dependent.

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Tweeting with the Stars:
Analyzing Linguistic Styles of Celebrities' Tweet and
Their Effect on Consumer Word of Mouth

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EXTENDED ABSTRACT

Brands are increasingly engaging celebrities to create a direct dialogue with consumers on social media, and in particular on Twitter (McCracken, 1989). It is, therefore, crucial to understand not only what celebrities tweet but also *how* celebrities tweet and which kind of tweets consumers retweet more frequently. Not only the content and intent of celebrity social media communication drives consumer word of mouth, but also the linguistic style.

In this study, we rely on speech act theory (Searle, 1969) to disentangle the different writing styles of celebrities' tweets and how they influence consumers to pass on celebrity information by retweeting. The more celebrity tweets are retweeted by consumers, the more the celebrity is attractive for brands. Speech act theory proposes that every utterance acts in that "to *say* something is to *do* something" (Austin, 1975, p. 12). Utterances' behavior is three-fold: locutionary, illocutionary, and perlocutionary (Austin, 1975). Whereas locution is the act of saying something and illocution is what individuals intend to achieve in saying something, perlocution is the effect of the utterance on its audience, irrespective of the earlier speech acts. Indeed, while celebrities may control the content and the intent of Twitter communications (Boerman, Willemsen, & van der Aa, 2017; Knoll & Matthes, 2017), stylistic differences in how they express themselves may manifest distinct cognitive effects in their audiences – notwithstanding of their initial intent.

We selected three categories of Twitter celebrities that are known to be high in pass-along value; chefs, self-made fashion bloggers, and famous personal trainers (Smith, 2013). Utilizing NCapture, an add-on of the Nvivo 11 software program, we harvest 20,993 tweets, i.e. the last available tweets for three Twitter accounts per celebrity category at the end of September 2017. To unearth the linguistic style elements, we use automated text analysis (Humphreys & Wang, 2018) and study how the usage of (1) function words and (2) emotions in celebrity tweets relates to retweets of consumers. We used the Linguistic Inquiry and Word Count (LIWC) 2015 software (Pennebaker, Booth, Boyd, & Francis, 2015; Pennebaker, Boyd, Jordan, & Blackburn, 2015) to perform the automated text analysis. In particular, we used three LIWC 'summary variables' that reflect psychological constructs: *analytical thinking, clout* and *tone*. Moreover, we assessed construct validity of the LIWC summary variables through manual coding achieving a generally moderate to near perfect agreement levels between coders and the automated text analysis (0.49 < a < 0.90) (Krippendorff 2018).

By means of latent class analysis, we find that there are five different tweet types that celebrities in these categories post with different levels of *analytical thinking, clout* and *tone*. We called these: *Internal Analysis, External Analysis, External Narrative, Internal Narrative, and Angry Outburst.* Results show that externally focused, and narrative styles are effective regarding word of mouth whereas emotional, angry outbursts only work for certain celebrities. The most common tweet type is Internal Analysis, which has a strong analytical, internally focused style, followed by External Analysis tweets, whose style is similarly analytical yet externally

focused. More story-based tweets (External and Internal Narrative) follow, with Angry Outburst tweets used least. Paradoxically, our results show that Internal Analysis, while most commonly used, is amongst the least effective styles regarding the creation of content with pass-along value. This suggests that celebrities mostly tweet in an ineffective style – producing content that does not spread as in the following example: Celebrity Chef 2: "I am LIVE to give you a sneak peak at [show deidentified] and give you a #[hashtag deidentified]roast!!!". When celebrity's tweets have an analytical, internally focused, and emotionally neutral style, consumers are less likely to be engaged, and consequently retweet the content. Relatedly, consumers are more willing to spread tweets that differ in style from this most common type. They seem to foremost prefer celebrities to entertain them with stories focused on the audience; as opposed to the celebrities themselves. External Narrative are thus most effective for all three celebrity categories, as suggests this example: Personal Trainer 3: "Sometimes the people around you won't understand your journey. It's okay. They don't need to. Your journey is not for them."

This paper contributes to the extant literature in three ways. First, we extend prior findings focusing on consumers' interaction with celebrities via social media (Akpinar & Berger, J. 2017; Boerman et al., 2017; Chung & Cho, 2017; Wood & Burkhalter, 2013), by providing a more minute typology of celebrity tweets and by empirically demonstrating what works best for whom. We find that the most common type of tweet is not the most effective regarding word of mouth. Second, we show that consumers appreciate tweets that are styled as stories as opposed to facts being more persuasive than facts, in line with the increasing attention of consumers and practitioners for storytelling (Pera & Viglia, 2016, Woodside, Sood, & Miller, 2008). Consumers prefer stories from celebrities that exude an elevated social status and are focused on the audience; not the celebrity. This level of detail about the effectiveness of narrative style for word of mouth was unknown before now.

Third, by taking a speech act theoretical perspective, we contribute to the celebrity marketing literature by not focusing only on the content and intent but on the style used by celebrities in the information they disclose. We show how linguistic style can create a perlocutionary speech act that affects consumers irrespective of (il)locution. This paper provides a replicable approach that further research can adopt to investigate how linguistic elements influence sharing behavior on social media. We clearly demonstrate that writing style specifically matters for celebrity communication. Not only what – but also how – the stars tweet affects consumers.

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Counter-Democracy and Conflict Market Culture:
How the Market Performs Political Polarization in Consumer Culture

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EXTENDED ABSTRACT

How is the Market and consumer culture involved in world politics? The social and cultural landscape in western democracies is increasingly depicted as politically polarized and conflicted. However, in marketing and consumer research this development has passed by seemingly unnoticed. Despite its more critical alignment, even the culturally oriented market research tradition consumer culture theory (CCT) has been shy in emphasis on the conflict-oriented relationship between world politics and consumer culture. Conflict has been approached through intra-consumer-cultural topics like consumer roles (Otnes, Lowrey and Schrum 1997), consumer resistance (Luedicke, Thompson and Giesler 2010; Kozinets and Handelman 2004; Holt 2002; Kozinets 2002), drama in market evolution (e.g. Giesler 2008), responses to immigrant consumer acculturation (Luedicke 2015), institutions' fetishization of ethniticies (Veresiu and Giesler 2018) and 'conflict culture' inside brand-related consumption communities (Husemann, Ladstaetter and Luedicke 2015). Although recognizing market actors' indirect involvement in shaping conflict these abovementioned studies do not assume a market that actively gives fuel to politically related conflict at a broader societal level. In this conceptual paper I therefore discuss an alternative interpretation of the contemporary market; that of *conflict as business model* with its dove-tailing market-mediated culture. Theoretically I build primarily on the political historian Rosanvallon's (2012) notion of *counter-democracy* and introduce the concept of *conflict market culture*.

COUNTER-DEMOCRACY

From political historian Pierre Rosanvallon's (2008) perspective the idea and practice of the western democratic society has the last two decades moved from a society of trust to a society of distrust. In a society of distrust the stabilizing constructions have fallen apart and no longer work as facilitators in the organization of the social, whereupon new control mechanisms appear; the *powers of oversight* (surveilling each other), *forms of prevention* (practices of reducing risk), and the *testing of judgement* (constant qualification checks). It is such a society that Rosanvallon calls *counter-democracy.*

There are many reasons for why this counter-democracy fosters a conflict culture, one being that counter-democracy does not imply that citizens are against or resisting democracy as such. Rather it implies that citizens are using their rights given by democracy to protest against its representatives without offering any alternative perspectives. Due to the perpetual speed coming with digital technology, in line with Sunstein's (2001) algorithmical echo-chambers that direct us exclusively towards self-affirmation and complacency, Rosanvallon claims that there is no democratic conversation left because there is no other perspective or argument that can persuade; only resentment of what already is. Adding to this unease, in social media culture impulsive responses foster swarm-like movements of affect (Han 2017) and conflict is exacerbated.

CONFLICT MARKET AND CONSUMERS

In CCT, politics has foremost been conceptualized in terms of mass-mediated ideologies in general (Arnould and Thompson 2005), and the ideology-specific influences of neoliberalism in particular (e.g. Veresiu and Giesler 2018; Thompson and Kumar 2016; Giesler and Veresiu 2014). But less has been paid to the role of marketers in the larger polarizing process referred to in this paper. Consumer

brands with gigantic marketing budgets like *Nike*, *Patagonia*, *Budweiser* and *Heineken* are now engaged in click-baiting by taking stances in conflicted world political issues. Their politically oriented marketing campaigns have provoked consumer engagement in social media forums where algorithmic self-confirmation together with dopamine-addictive mechanisms built into the services, have encouraged consumers to practice a *market*-mediated citizenship, spinning on media sholar Dahlgren's (2013) concept of "mediated citizenship". But the consequences of this for the political climate is largely ignored by consumer researchers as well as social commentators.

CONFLICT MARKET CULTURE

By applying the notion of counter-democracy to the market, what do we see? As introduced here a *conflict market culture* is not referring to a consumer culture where consumers are in interpersonal conflict with each other or with marketers. Rather, from Rosanvallon's (2012) counter-democracy perspective, consumers are left with nothing but cantankerousness, and as digital platform models predominantly involve profiting on clicks (e.g. by attracting sellable user information or selling advertisement space) exacerbated by conflict engagement through emotion and affect (Han 2017; Ahmed 2004), it is the market's business model *per se* that is organized around conflict. A conflict which in any occurrence is the sole position for the consumer to take. In other words, this conflict market is in a digital, global consumer culture a system where the very subject matter for conflict also performs polarization by catering to all actor interests (Callon 2010).

In CCT research theorization closest to this would be Holt's (2002; 2004) notions on post-postmodern branding or cultural branding. Brands are there said to become iconic if they (through their communication) manage to solve cultural contradictions in society that create acute anxiety in consumer culture. But what is new in the contemporary conflict market is that brands do not profit from solving any anxieties but from sparking them. As there is no democratic conversation to join, locked in the counter-democratic position subjects are enforced to continue sparking the polarized conflict, and with time the conflict market sediments culturally and structurally.

Implications and Future Research

For consumers the emerging conflict market culture will probably be emotionally tempting to be absorbed by, as it upsets. But whereas advocates of political consumption highlight the positive outcomes coming with growing political interest among citizen consumers, critics warn that the market is never a credible ballot box as companies in their aspiration for growth and profit will always act opportunistically and change opinion populistically. At the other side of the counter, market actors must scrutinize their stances according to genuinity and as with consumers, they must ask themselves what may happen in the long run if they increasingly interfuse with political parties, and if they follow the trend of participating in polarization through their confrontative style of communication and action for the sake of click-baiting. In line with this, future research must critically take into account the new conflict model structuring the market, and the resentment culture it nurtures. In counter-democracy markets and consumer culture are not only amplifiers of neoliberal market economy but political polarizers in their own rights.

What You Predict And What You Would Do:
Reverse-Projection Beliefs in Strategic Contexts

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EXTENDED ABSTRACT

A large literature has demonstrated that people project their own preferences and experiences when making estimates about others (Allport 1924; Epley et al 2004; Orhun and Urminsky 2012; Robbins and Krueger 2005; Ross, Green and House 1977). Thus, the prediction a person makes about others' attitudes or behaviors can be informative of that person's own attitudes or behaviors. In this project, we investigate whether observers treat predictions as informative.

In Studies 1a (N=108) and 1b (N=112), online participants stated whether they engaged in each of seven behaviors and predicted other respondents' answers. They were then asked to predict the likelihood of different people saying they had engaged in each behavior on a second list (counterbalanced). They were shown the person's prediction of how prevalent the behavior was (either under 25%, 25% to 50%, 50% to 75%, or over 75%), and paid for accuracy. The behaviors included items associated with generosity, antisociality, dishonesty and knowledge.

Overall, participants estimated a higher likelihood of a behavior among people who had predicted that others were more likely to engage in that behavior (Study 1a: r=.39, p<.001; Study 1b: r=.38, p<.001). In each study, the relationship was positive for all 14 items tested (r>.23 for each item). While the predictions were diagnostic, the results also indicated significant miscalibration in the use of others' predictions, particularly for very high predictions.

We find similar results in the context of beliefs about the 2016 Presidential election (Study 2, N=198). We based the study on a CBS news poll (N=1048 registered voters), in which participants expressed their party affiliation and then predicted the outcome of the election. Our participants then predicted party affiliation based on people's predictions, and estimated that people who predicted a Clinton win were most likely Democrats (62% vs. 54% actual), a Trump win were Republicans (67% vs. 53% actual) and who didn't know were Independents (50% vs. 52%). In particular, the participants over-estimated the informativeness of a Clinton or Trump prediction.

In Study 3, 209 online participants took one of trivia quizzes (either a fill-in-the-blank knowledge quiz or a multiple choice numeric estimation task), and then predicted the average score on the quiz of other participants. Next, participants estimated the scores of individuals who had made each of the possible score predictions. For both quizzes, participants believed that people who predicted better average scores had themselves scored higher (r=.82 fill-in, r=.58 multiple-choice, ps<.001). However, the predictions were an informative cue for the fill-in quiz, in which participants were more likely to know that they didn't have the answer (r=.74) but not for the multiple choice quiz, where they chose one of four plausible alternatives (r=.09). As a result, estimates based on the other person's predictions were relatively accurate in the fill-in quiz version (r=.88), but less accurate and biased by the prediction information in the multiple-choice quiz (r=.28).

In Study 4, 139 students played incentive-compatible dictator games in groups in the lab and predicted others' choices. In the focal tasks, they chose between a certain amount of money and receiving what another person had chosen to give in the dictator game, with or without information about their potential partner's predictions about others' choices. We also elicited their willingness-to-pay for different information about another potential partner, including for that person's predictions.

Participants were willing to pay to find out what their potential partner predicted about others, significantly more than for non-diagnostic information (height). Furthermore, when participants were randomly assigned to see information about a potential partner, that information affected their decision. On average, when they found out that the person they were paired with was a pessimist about others (e.g. predicted less generosity than the median), they were less likely to take what that person had chosen for them (35%) than if the potential partner had made an optimistic prediction (67%) or the prediction was unknown (69%, p<.01).

In Study 5, 81 online participants read about a game in which players reported the outcomes of four coin-flips, receiving $1 for each reported "tails" outcome. Those assigned to be players, reported their outcomes and predicted the average earnings of others as well as whether they thought others were reporting honestly or not. Receivers chose between getting a certain reward and the unclaimed remainder of the possible $4 from a randomly matched player. Players cheated (average earnings =$2.98 vs. $2, p<.001) and predicted that others earned more than the honest amount ($2.73 vs. $2, p<.001) and that others did not report honestly (62%). Notably, their prediction of what others earned was predictive of what they had themselves claimed (r=.36), but whether they said others were honest or not was not diagnostic (r=.03). Nevertheless, receivers used both sources of information, and were significantly more likely to take the certain amount if their potential partner predicted that others claimed all $4 (64% vs. 35%) or if their potential partner said that others were dishonest (64% vs. 36%).

Across the studies we find that people treat a prediction of others' behaviors as diagnostic, both when the prediction is and is not diagnostic. As a result, they avoid having their outcomes determined by potential strategic partners who make predictions that most people are selfish or dishonest. These findings have broad implications for policy makers, marketing communications and public relations. Spokespersons who make negative predictions about others, including competitors, may undermine their own credibility, being ascribed by listeners the behaviors they have predicted.

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Follow 'Them', Distance From 'One of Us': Group Membership Drives the Effectiveness of Exemplar Overachieving Behavior

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EXTENDED ABSTRACT

Ever felt inspired by a celebrity telling you to eat healthy or a vlogger taking personal exercise and fitness to outrageous lengths? Have you considered taking up the challenge and changing your largely sedentary lifestyle? Throughout the history of health promotion, endorsement by exemplars or models has been one of the most frequently used behavioral change techniques to foster a better and healthier lifestyle and to inspire and motivate people (e.g. Kim et al., 2012; Feeney et al., 2011). Indeed, research supports the notion that simply observing others' virtuous behavior can inspire us to pursue similar actions (Bandura, 1971; O'Connor & Monin, 2016).

What models fulfill this role the best? Strikingly, a closer look at the most prolific and influential models appears to suggest that they are relatively 'extraordinary', either because of their status as celebrities and famous athletes, or because of their ability to exemplify the targeted (health) behavior at extreme levels, such as eating a fully vegan diet, or both. As a case in point, consider Kristina Carrillo-Bucaram, a fully vegan vlogger, whose YouTube channel "FullyRawKristina" has a staggering 1.063 million subscribers. In the present work we focus on the latter: extreme overachieving behavior. This behavior typically exemplifies high standards by showing that idealized levels and perfection is achievable. Various studies suggest that despite their extremity, people tend to feel inspired by or associate themselves with such overachievers: for example, sports teams who won a game (Cialdini, 1976) or the moral behaviors of religious leaders, philanthropists, or charity workers (Monin, 2007).

Interestingly, other streams of literature show a different picture. A model's behavior may be seen as morally implicative, suggestive of the (high) standards that are normatively appropriate for others (the so-called moral do-gooder effect, see for example Minson & Monin, 2012; O'Connor & Monin, 2016). As a result, the outlying behavior of overachievers may evoke annoyance (Minson & Monin, 2012) and make the observer feel inadequate (O'Connor & Monin, 2016). How can these two conflicting findings be reconciled?

We argue that being extraordinary makes overachievers perceived as not belonging to 'us' (or seen as 'them' e.g., Heckert & Heckert, 2002; Minson & Monin, 2012) and this is exactly why such models are effective. In the present work, we show that these models work *because* they are extraordinary, and *by virtue* of them being "not one of us", but that their impact not only vanishes but actually backfires when they come too close and present themselves as one of us. The implication of this reasoning is that the overachieving behavior can be effective, as long as it is displayed by models that do not belong to one's in-group, hence, as long as their out-group identity remains salient.

The negative effect of models would then follow from the perception that they are considered as a part of the in-group, a notion supported by the literature on the so-called black sheep effect – in-group members who deviate from the group norm evoke more negative evaluations than deviating out-group members (Marques et al., 1988; Marques & Paez, 1994; Marques et al., 2001).

If in-group overachievement indeed implies the threat of the spread of higher standards in the whole group, such behavior can be seen as unwanted, creating a sense of incongruity and discomfort between the self and one's group (e.g., Levin & van Laar, 2006). The most efficient way of resolving the incongruity is to distance themselves from the group by downplaying its centrality and importance to one's identity. We close the route via reduced centrality by making the overachieving behavior the (trending) descriptive norm in the group. If a majority of the group becomes overachievers ('us'), they by definition redefine the group norms – making overachieving a trending, powerful and ultimately descriptive group norm to which people have to conform or face expulsion from the group (e.g., Cialdini, 2001; Goldstein et al., 2008; Mortensen et al., 2019; Salmon et al., 2014; Salmon et al., 2015; Reno, 1993). If this is the case, being exposed to overachieving behavior by a majority of in-group members will attenuate the backfire effect and conversely lead to a desire to assimilate and follow such behavior.

To test our hypothesis, we carried out three experiments presenting overachievement behavior in the domain of healthy eating. Experiment 1 (N=231) tested the notion that being exposed to overachievers presented with the out-group identity leads to following overachievers' behavior. In contrast, being exposed to overachievers presented as 'one of us' (an in-group) leads to lower willingness to follow such exemplar behavior. Experiment 2 (N=189) replicated the basic findings and showed the mediating role of centrality felt towards the in-group: people feel decreased in-group centrality when being exposed to the in-group overachieving behavior vs normative behavior. In turn, such a decrease in centrality led to less consumption of healthy food. Finally, in Experiment 3 (N=299) we used a moderation by design approach and showed that when the overachieving behavior becomes the (trending) descriptive norm in the group, the backfire effect attenuated and led observers to conform to such behavior.

We contribute to the literature by showing that the effectiveness of exemplar overachieving behavior as a behavioral change technique depends on group membership. Across three experiments, we show that overachieving behavior can be effective, as long as it is displayed by models that do not belong to one's in-group. Such models work because they are extraordinary and by virtue of this being "not one of us". We show that one way to resolve such incongruity is to distance oneself from the group by downplaying its centrality. Moreover, the negative distancing effect vanishes when the overachieving behavior becomes the (trending) descriptive norm in the group. The current findings advance our understanding of when and how presenting overachieving behavior leads to the increased desire to follow that behavior. Taking into the account the prevalence of such influence techniques in communication messages, our research has important implications for marketers and public policymakers interested in understanding the effectiveness of health interventions.

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The False Negative Rate of Confound Checks
and Why You Should Not Use the PANAS to Exclude Mood Effects

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EXTENDED ABSTRACT

For valid experiments, it is important to test whether the manipulation affects what it is intended to affect (a manipulation check). Another important criterion is that the manipulation does *not* affect other constructs that form alternative explanations to the hypothesis of interest (a confound check). Perdue and Summers (1986) argue that one should put as much time and effort into selecting the right confound check, as one should in selecting the manipulation check.

A key insight from Simmons, Nelson, and Simonsohn (2001) is that researchers are (often unconsciously) biased towards making analytical choices that are in line with their hypotheses. Such researcher degrees of freedom create false positive findings. However, such researcher degrees of freedom can lead to an exact opposite effect for confound checks: When researchers do *not* want to find an effect they are (unconsciously) biased toward not finding it, thereby likely creating false negatives. We illustrate this problem with the case of mood, a construct often tested for as a confound check in consumer research and psychology.

THE PROBLEM WITH CONFOUND CHECKS: THE CASE OF MOOD

We identified all articles in the Journal of Consumer Research (JCR) and the Journal of Personality and Social Psychology (JPSP) that refer to mood, positive affect, and/or negative affect published between 1988-2017 via Google Scholar. JPSP publishes much more articles than JCR (around 4000 for JPSP in this period and 1500 for JCR), so we took every fifth year of JPSP articles. This resulted in 617 articles in JCR of which 213 of them actually measured mood (or affect) in 420 total studies; and 488 articles in JPSP of which 174 papers actually measured mood. We find that in 61.5% of these cases mood was used as a confound check, in 22.6% of cases as a manipulation check, in 15.9% of cases as a dependent variable, and in 0.5% of cases as the independent variable. Around 13.9% of papers in JCR (21.0% in JPSP) measure mood, and 9.5% of all papers in JCR (14.1% in JPSP) measure mood as a confound check.

In 59.1% of cases the mood measure was self-created by the authors. Of the existing scales, only the PANAS (Watson et al., 1988) was administered frequently (in 19.4% of tests), the second most frequently used scale only (5.0%). Four problems with the measurement of mood as a confound check were found.

Problem #1: Likely Confirmation Bias

When an effect of mood was predicted, 94.3% of reported mood tests found a significant result. When used as a confound check and no effect was expected, 93.1% of the tests found no significant effect. It seems unlikely that scholars are this good at making predictions, and these numbers probably reflect confirmation (and/or publication) bias.

Problem #2: Reliability

The average reported reliability of scales tends to be good ($\alpha = .86$), but was only provided for 48.6% of multi-item scales. Reliability for confound checks is reported far less often than for manipulation checks/dependent variables (30.9% vs. 60.6%, $\chi^2 = 59.15$, $p < .001$). Because an unreliable scale makes null-effects more likely, it is worrying that this information is so often missing.

Problem #3: Validity

Many self-generated scales ignore important theoretical considerations. Only 4.8% of self-generated mood measures used a distinct arousal dimension of mood, and 49.6% of mood measures could not pick up on potential mixed mood effects. Furthermore, the PANAS by design excludes feelings like happiness and sadness (Cohen, Pham, and Andrade 2006). This seems problematic as these feelings are often the type of feelings that we want to rule out as an alternative explanation when using it as a confound check.

Problem #4: Sensitivity

In 72.2% of manuscripts that used a self-generated mood measure as a confound check there was *no* evidence in the paper whatsoever that the scale was actually sensitive enough to pick up on possible effects, as no significant effect (to a manipulation, DV, or any other variable) of it was reported.

The PANAS is almost exclusively used as a confound check (87.8%). However, the state measure of the PANAS has a high test/retest reliability, creating doubt in how sensitive it can be as a state mood measure. A study (N = 198) indeed finds that the PANAS is sensitive enough to distinguish a within-subjects effect of a recall of a positive or negative event, but not on whether that event was mild or intense (with 80% power to detect d's ≥ 0.50).

CONCLUSION

As the case of mood illustrates, the way scholars use confound checks is suboptimal as there are problems with the reliability, validity, and sensitivity of the measures being used. If indeed many mood measures used as confound checks were not suited for that task, actual mood effects may have gone unnoticed in the literature. Theories for which mood was excluded as an alternative explanation might not have done so sufficiently. Future work using mood measures as confound checks should elaborate on the selection of the mood measure (for example regarding the valance / arousal dimensions, or the possibility of mixed moods), and demonstrate the sensitivity of the chosen measure.

More broadly, the ostensible bias in the selection of a mood measure (e.g., using the PANAS as a confound check, but other measures as a manipulation check), indicates that problems around researcher degrees of freedom extend to the use of confound checks as well. Perdue and Summers (1986) recommended that as much care should go into the selection of a confound check, as in the selection of a manipulation check. However, the selection of a confound check might even be *more* important: Especially when researchers are biased towards not finding an effect, a confirmation of the validity, reliability, and especially the sensitivity of the measure are required to help prevent false negatives.

Effect of Consumer Anticipation on Post Consumption Evaluation of Pleasant Products

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EXTENDED ABSTRACT

Consumer anticipation is "a mental process by which consumers consider the physical, experiential, social, emotional, or behavioural consumption outcomes that are expected to accrue to the self from a yet to be realized consumption decision or experience" (Vichiengior et al. 2019, 3). It results in an *anticipation effect*, i.e. an increase in attitude toward the object of future consumption (Nowlis et al. 2004; Chan and Mukhopadhyay 2010). However, limited attention has been paid to (1) the mechanism that underlies the *anticipation effect,* and (2) whether this effect is long-lasting, i.e. not overridden by direct experience with the consumption object. Specifically, we predict that the *anticipation effect* is long-lasting and moderated by the intensity of consumer anticipation, which is itself driven by involvement in the product category. First, consumer anticipation involves different mental processes, such as imagery processing, elaboration, forming expectations, pre-factual thinking, planning and savouring. We suggest these mental processes may result in additional information input that may be integrated with prior knowledge structures, thus making the attitude towards the object of anticipated consumption more elaborated (MacInnis and Price 1987). In addition, persuasion models predict that highly elaborated attitudes show greater resistance to disconfirming information (e.g. Petty and Cacioppo 1986). Thus, even though attitudes are stronger when they are based on direct behavioral experience (Fazio et al. 1982), they may be more resistant to information gained through direct experience if consumers have anticipated the future consumption experience because we expect them be more elaborated. We therefore hypothesize the *anticipation effect* to be long-lasting.

Second, consumers may vary in how intensively they engage in the mental processes involved in consumer anticipation. We further suggest that attitude change is more likely to occur if consumers are intensively anticipating the future consumption experience because this provides them with more additional information input to be integrated with prior knowledge structures. In other words, we hypothesize that the *anticipation effect* is increased with increased consumer anticipation intensity.

Third, individuals dedicate time and effort to mental activities only if they are motivated to do so (Rosch 1987). As the mental processes involved in consumer anticipation all require cognitive efforts, consumer anticipation may be more intense among consumers highly involved in the object of anticipated consumption because such consumers will be more willing to allocate mental resources to anticipate the future consumption experience. We therefore hypothesize that product category involvement indirectly drives the *anticipation effect via* consumer anticipation intensity: involvement fosters consumer anticipation intensity, which results in an increased *anticipation effect*.

We investigated these assumptions in three experiments in which we measured

Consumers' attitudes at different stages of delayed consumption of a pleasant product: pre-anticipation (*Att1*), post-anticipation (*Att2*), and post-consumption (*Att3*).

Experiment 1 explored the long-term effect of consumer anticipation. Undergraduate students from a French business school took part in an experiment (*N*=54) involving 1/ anticipating or not and 2/ taking part in a salsa dance activity. Respondents were told they would take part in a salsa dance activity that was to take place later on the same day and *Att1* was measured. Respondents were then randomly assigned to an anticipation group, where they were exposed to information about salsa to increase the likelihood that they would anticipate the future activity, or to a non-anticipation group, where they took part in another activity that required most of their attention, thus decreasing the likelihood that they would anticipate the forthcoming salsa activity. These assumptions were pretested with independent samples. Then, *Att2* was assessed and all respondents took part in the salsa activity. *Att3-1* was measured immediately after consumption and *Att3-2* two weeks later. We performed a series of two-way within subject ANOVA tests to observe attitude change at each stage of the experiment. The difference between *Att1* and *Att2* is higher in the anticipation group than in the non-anticipation group ($F(1,53)$=5.365, p<.05). We observe a pre/post-anticipation (*Att1/ Att2*) attitude increase in the anticipation group ($F(1,26)$=7.833, p<.01), but not in the non-anticipation group ($F(1,26)$=0.115, p=ns). In other words, an *anticipation effect* is observed. There is an attitude increase due to direct experience (*Att2/Att3-1* and *Att2/Att3-2*), but no difference in attitude increase is observed between the anticipation and the non-anticipation groups. Finally, total attitude increase (*Att1/Att2/Att3-1/Att3-2*) is higher in the anticipation group than in the non-anticipation group ($F(1,53)$=3.906, p<.05). Results suggest an *additive effect* by which the attitude increase due to consumer anticipation persists over time, and support our view that the *anticipation effect* is long-lasting.

Experiment 2 explored the moderating effect of consumer anticipation intensity. Master students from a French business school (*N*=80) took part in an experiment involving anticipating tasting chocolate. Respondents were explained they would take part in a chocolate test later on the same day and where they could find information regarding the focal chocolate. Then, *Att1* was measured. After a one-hour anticipation period, *Att2* and Consumer Anticipation Intensity (*CAI*) were assessed, and respondents tested the chocolate. We performed a repeated measures ANOVA to observe attitude change, with *CAI* entered as a covariate. A pre/post-anticipation (*Att1/Att2*) attitude increase is observed ($F(1,79)$=6.538, p<.05) and, as expected, the *anticipation effect* is increased with increased consumer anticipation intensity ($F(1,79)$=9.853, p<.01).

Experiment 3 aimed to explore the effect of product category involvement and to further increase confidence in the results from Experiments 2 and 3. Undergraduate students from a Thai public University took part in the experiment (*N*=143) involving 1/ anticipating and 2/ tasting chocolate marketed by a European company. As in Experiment 2, respondents were explained they would take part in a chocolate test later on the same day and where they could find information regarding the focal chocolate Then, *Att1* was measured. After a one-hour anticipation period, *Att2* and *CAI* were assessed, and respondents tested the chocolate. As in Experiment 1, *Att3-1* was measured immediately after consumption and *Att3-2* two weeks later. Personal Involvement (*PI*) in the product category has a positive effect on consumer anticipation intensity (β=0.313, t=3.913, p< .001). We performed a series of repeated measures ANOVA tests to observe attitude change over time, with *CAI* and its interaction with *PI* as covariates. *PI* is not interacting with *CAI* and the passage of time to explain attitude increase ($F(1,142)$=0.967, p=ns), thus supporting

our view that involvement is a driver of consumer anticipation intensity but does not directly explain attitude change. In addition, the *anticipation effect* (*Att1/Att2*) is increased with increased *CAI* (*Att1/Att2*: $F(1,142)=25.403$, $p<.001$). Similarly, the *additive effect* of consumer anticipation (*Att1/Att2/Att3-1/Att3-2*) is also increased with increased *CAI* (*Att1/Att2/Att3-1/Att3-2*, $F(1,142)=5.741$, $p<.01$).

Taken together, our results show that attitude change in contexts of delayed consumption is a process where the pre-anticipation attitude is the initial internal information, consumer anticipation as well as direct experience with the attitude object provide incremental information input, and the outcome is the final attitude. We suggest an *additive effect* by which the attitude increase due to consumer anticipation persists over time, this effect being driven by product category involvement.

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The Shame of It: Consumer Response to Transgressive In-Group Brand Behavior

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EXTENDED ABSTRACT

Consumer relationships with brands provide tremendous value to firms, and can also protect the brand, as consumers with strong brand relationships are able to maintain positive views of the brand when they receive negative information about it (Cheng, White and Chaplin 2012). However, it remains unclear how highly-connected brand users respond when the source of negative information is not external to the brand community, but comes from the behavior of other brand users.

Consumers view certain behaviors by other brand users, such as flaunting the brand (Cannon and Rucker 2015) or using profanity in conjunction with it (Schau and Gilly 2003) as socially unacceptable, because these are norm violations. We refer to these behaviors as *transgressive brand usage.* Seeing others engaging in these types of behaviors leads to negative evaluations of the flaunters and, for individuals who are weakly connected to the brand, to lowered evaluations of the brand, but not so for highly-connected individuals (Ferraro, Kirmani and Matherly 2013). Still, do these highly-connected consumers truly remain unaffected by observing inappropriate use of their brand? In this research, we consider this question by investigating how highly-connected brand users respond to transgressive brand usage. We propose this type of behavior leads more highly-connected observers to experience vicarious shame, which arises when other brand users behave in a manner that reveals a negative aspect of the group's social identity (Johns, Schmader and Lickel 2005). The experience of vicarious shame may be unpleasant enough to motivate consumers to distance themselves from the brand. We present six studies to test these predictions.

Study 1 used a 2-transgressiveness (high, low) x 2-self-affirmation (control, present) between-subjects design, with SBC as a measured factor. The focal brand was Beats, and transgressiveness was manipulated through a video of an individual using the brand conspicuously. After viewing the video, participants in the self-affirmation condition completed a self-affirmation task adapted from prior work (White and Argo 2009), while the control condition completed a distractor task. All participants then completed measures of vicarious shame and SBC. A regression revealed a significant three-way interaction on vicarious shame. In the control condition, when transgressiveness was high, there was a significant positive effect of SBC on vicarious shame, but when transgressiveness was low, there was no effect. In the self-affirmation condition, no effects were significant, as expected.

Study 2 used a 2-transgressiveness (high, low) between-subjects design, with SBC as a measured factor. We used the same manipulation as in study 1, but prior to completing the other measures, participants responded to a scale measuring their motivation to distance from the brand (Schmader and Lickel 2006). We replicated our interaction results on shame, and extended the effect to distancing. A moderated mediation analysis provided further evidence for our model, with an indirect effect on distancing observed through vicarious shame in the high transgressiveness condition, but not when transgressiveness was low.

Study 3 tested if the presence of a justification served as a boundary condition. We expected highly connected consumers would not experience shame when a justification was provided, and tested this using a 2-justification (unjustified, justified) between-subjects design, with SBC as a measured factor. Participants viewed an Instagram post with an individual conspicuously holding a Nike shoe. In the justified condition, the same post was used, with an additional note under the username indicating the post was a "Paid partnership with Nike." We observed the predicted interactions on distancing and shame, with the unjustified condition replicating the findings of the high transgressive conditions, but in the justified condition these effects were not significant. A moderated mediation analysis revealed similar findings to study 2.

Study 4 was designed to replicate these findings using a different manipulation of transgressiveness, and employed a 2-transgressiveness (high, low) x 2-brand (Patriots, Rams) between-subjects design, with SBC as a measured factor. SBC was measured one week prior to the main study, and the brands served as replicates. Two days after the NFL conference championships, participants were shown a Twitter post, with the high transgressiveness tweet containing profanity, and responded to distancing and shame measures. A regression revealed the predicted interactions on vicarious shame and distancing, and we replicated the mediating effect of vicarious shame.

In the final studies, we examined real world user brand engagement behaviors in the face of transgressive brand usage on Twitter. In study 5, we examined followers of major championship winning teams in the 2016-2018 seasons, measuring SBC through their mentions of the team before the championship, and engagement as the number of team-mentioning tweets in the 30 days following the championship. Transgressiveness was captured at the team level through other follower's use of profanity during the same period. A negative binomial model revealed a significant interaction of SBC and transgressiveness, and marginal effects analysis showed that, for brands with low [-1SD] (high [+1SD]) levels of profanity use, a 10% increase in SBC (measured by tweets mentioning the team prior to the championship), was associated with a 26.8% (with only a 13.7%) increase in tweets about the team in the postseason. These effects were robust to a variety of alternative measures and specifications to address heterogeneity.

In study 6, we employed a similar approach while examining a stronger test of engagement behaviors, in the decision to unfollow a brand during 2018 MLB playoffs. Using a logit model with similar measures of SBC and transgressiveness, we observed a positive interaction of SBC and transgressiveness. At low transgressiveness, there was a negative effect of SBC on the likelihood of unfollowing the brand, but at high levels, there was a significant positive effect of SBC, indicating high SBC consumers were more likely to unfollow the brand.

Taken together, our results show highly connected consumers experience vicarious shame after observing transgressive brand usage, and this motivates them to distance themselves from the brand, both in measured motives and in actual behavior. This demonstrates the insulating effects of brand connections may have limits, and also highlights how broad exposure of such behavior through social media may create problems for brand managers.

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Package Offers and Price Rate Calculations: How Price Rates Influence Price and Promotional Sensitivity

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EXTENDED ABSTRACT

Consumers are often faced with quantity offers, which can be evaluated by computing a price rate—a ratio of one element (quantity or price) to another. We argue that when computing ratios, consumers are more likely to use the larger (smaller) number as the numerator (denominator). Not only is it easier to divide a larger number by a smaller number, but this is consistent with early experience with fractions (Fischbein et al. 1985).

We argue individuals will give more importance to price when it is in the numerator relative to when it is in the denominator. Thus, we hypothesize consumers will be more inclined to use a DPU (UPD) price rate when the product price is greater (less) than the quantity, which will in turn make price more (less) important to consumers' judgments. Accordingly, we expect consumers to be more price and promotion sensitive when the price is larger than quantity.

We test our hypotheses in nine studies. Studies 1A-C show the prevalence of price rate computations. Study 2 demonstrates that package prices with a larger price element (prompting DPU price rate calculations) generate greater price sensitivity. While in study 2 we use a between-subjects design, in study 3, we show the effect on promotion sensitivity in a within-subjects design, where participants evaluate reference and promotional package offers. In study 4, we replicate these effects, and provide process support by showing the mediating role of price importance. In study 5 we provide process-relevant moderation evidence to support the centrality of price rate calculation in driving these effects. Study 6 extends our investigation by showing that encouraging consumers to use DPU (vs. UPD) rates increases promotional sensitivity. Finally, we demonstrate the effect on choice in Study 7.

In studies 1A (N=182), 1B (N=203), and 1C (N=72), we found individuals often choose to compute price rates, and they tend to do so by putting the larger element in the numerator. This held for a variety of products and even judgments of efficiency. The remaining studies tested our core hypotheses.

Study 2 (N=204) used a 2-larger-element x 2-offer (poor, good) between-subjects design. We found a significant larger-element x offer interaction, such that individuals were more sensitive to the quality of the offer (i.e., price) when the price (vs. quantity) element was larger.

Study 3 (N=242) studied the effect on promotion sensitivity using a 2-larger-element x 2-order (quantity-price, price-quantity) x 2-promotion (small, large) between-subjects design. In all conditions, participants were shown an initial referent and a promotional offer. Participants computed a price rate and evaluated the referent offer, and then did the same for the promotional offer. Regardless of order, we found a significant larger-element x promotion x offer mixed interaction. In the small promotion condition, the sensitivities did not differ between the larger element conditions. However, in the large promotion condition, sensitivity was higher in the larger price condition.

The goals of study 4 (N=164) were to replicate these results and shed light on the process. Participants were assigned to 2-larger-element cells. Participants reported how they calculated and evaluated referent and promotional offers, and then reported how important price was in their evaluations. There was a significant larger-element x offer mixed interaction. Sensitivity and price importance were higher in the larger price condition, and the indirect effect was significant.

Study 5 (N=105) provides additional support with process-relevant moderation. We explicitly asked participants to calculate using DPU or UPD, in order to isolate the role of the resulting quotient. Participants were assigned to a 2-larger-element x 2-calculation (DPU, UPD) between-subjects design. Participants were forced to calculate a price rate using DPU (UPD) before proceeding. Because we divorced calculation method from larger element, we expected to observe greater sensitivity in the DPU (vs. UPD) condition, which is what we found. Price importance also tracked calculation method, and its mediating role was confirmed in a process analysis.

Study 6 (N=187) explored whether firm-provided price rates could serve as effective nudges to induce consumers to evaluate offers as if they had computed the price rates themselves. We used a 2-larger-element x 3-price-rate (control, DPU, UPD) between-subjects design. In the DPU (UPD) condition, we also provided price rates with the offers. In the control condition, participants computed price rates however they wanted. We also expected showing people DPU (UPD) price rates to result in greater promotion sensitivity. There was a marginal larger element x price rate interaction. Sensitivity was higher when price (vs. quantity) was larger in the control condition, but this difference did not emerge in the DPU or UPD conditions. Further, sensitivity was higher in the DPU (vs. UPD) condition.

Study 7 (N=400) used a 2-larger-element x 2-relative-price between-subjects design. Relative price served as a replicate. Participants could choose between Tide and the store brand of laundry detergent, creating a trade-off between choosing on-brand or a lower unit price. More price sensitive individuals were expected to choose the store brand over Tide. After choosing, they also reported their baseline preference between the two and indicated whether they had divided or not.

We found a significant larger element x division x preference interaction on choice. When participants calculated, there was a significant effect of larger element when participants had a baseline preference for Tide, but not when participants had a baseline preference for the store brand. In other words, for consumers who *could* become more price sensitive in their choices, a larger price (vs. quantity) increased price sensitivity when they calculated a price rate, which is in line with our hypotheses.

Consumers tend to compute price rates by following an intuitive model of division that dictates the larger element be the numerator. Thus, we show the relative numerosities of offer elements affect consumers' price rate computations and, in turn, price and promotion sensitivities. We show this occurs because a DPU (vs. UPD) format increases the importance of price in evaluations. Accordingly, forcing DPU (vs. UPD) computation, or nudging interpreting the information in a DPU (vs. UPD) way by providing price rates, generate the same effect.

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The Upside of Myopic Loss Aversion

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EXTENDED ABSTRACT

To protect investors from themselves, firms and financial advisors often recommend that investors ignore their day-to-day returns, and instead focus on long term returns. For example, one Israeli bank sends performance reports to investors less often in order to protect investors from seeing downswings (Gneezy, Kapteyn, and Potters 2003). This approach is bolstered by research in which experimental participants take on more risk, leading to higher final wealth, when investment decisions are bracketed broadly—that is, when participants make multiple investments at once and only see their aggregated outcomes (Gneezy and Potters 1997; Thaler et al. 1997). The combination of narrow bracketing— when participants make one choice at a time and receive immediate feedback—and loss aversion is a leading behavioral explanation for the equity premium puzzle: the pattern that, despite their higher long run rate of return, stocks are underpriced relative to risk-free government (Benartzi and Thaler 1995; Lynch 2015).

However, the paradigms used for most experimental work investigating the effects of loss aversion and narrow bracketing differs from the reinvestment environment typically faced by investors. In the market, investors reinvest their previous returns, whereas, in repeated investment experiments, participants are externally given a new allotment on each round, making each round's returns independent of prior returns. The latter non-reinvestment environments, where whatever happens in previous rounds does not affect how much the person has available to invest in the current round, are less realistic than reinvestment environments, where the outcomes from previous rounds determine the amount available for investment in the current round.

Reinvestment environments have different structural properties than non-reinvestment environments, yielding different models of how an individual's wealth evolves over time. Each warrants a different normative standard, such that behavior considered suboptimal in a non-reinvestment environment may be considered normative in a reinvestment environment. Specifically, narrow brackets may be bad for investors in non-reinvestment environments, but, due to a different normative standard, good for investors in reinvestment environments.

We compare two normative standards—expected value and time-average—which have been confounded in previous work. In reinvestment environments, the expected value does not correspond to what an individual experiences over time, but the time-average growth rate does. That is, if we wanted to predict an individual's wealth after 1000 rounds in a reinvestment environment, the expected value will not make an accurate prediction, but the time-average will. We therefore argue that the time-average growth rates are more relevant to investors in a reinvestment environment than the expected-value.

In line with narrow brackets being good for investors, four studies demonstrate that, in a reinvestment environment, narrow bracket participants, compared to broad bracket participants, make investments with higher time-average growth rates. In the target task, participants made 9 repeated learning block decisions about the percent of their wealth to invest in a lottery. Feedback was given round-by-round (narrow brackets) or only at the end (broad brackets). Performance was compared in a subsequent test block where both groups faced the same task: make 9 additional choices with feedback only at the end. In Study 1, those in the narrow bracket condition invested less of their wealth than did participants in the broad bracket condition, yielding higher time-average growth rates. Consistent with a preference for a higher time average growth rate, participants ranked final outcome distributions—histograms displaying the probability of receiving an amount of money—according to the time-average not the expected value (Study 2). In other words, narrow brackets brought participants closer not only to the time average maximizing strategy but also closer to their own preferred final outcome distribution. In Study 3, narrow bracket participants outperform broad bracket participants in an incentive compatible task testing participants' understanding of the reinvestment environment. In addition, by changing how broad bracket participants view their results, we show that narrow brackets lead to improved performance, in part, because the narrow bracketing procedure allows participants to see their wealth evolve over time (Study 4). These findings suggest that, in reinvestment environments, narrow brackets can lead to investment decisions with better outcomes than those made under broad brackets.

While the test block showed that narrow bracket participants gained a superior understanding of the risk structure, in the learning block, both groups of participants invested a similar percentage. This was, in part, because narrow bracket participants chased their losses—meaning, they invested a higher percent if they lost on the prior round than if they won and, when they were below the starting wealth of $200, there was a negative relationship between the prior round's wealth and the percent they invested. While participants chased their losses in the learning block, they did not do so in the test block. Thus, these results point to the importance of the test block for understanding the effects of brackets. In particular, narrow brackets may have multiple, competing influences on choice.

At first glance, it appears difficult to reconcile our findings with prior studies of brackets and risk taking (Kahneman and Lovallo 1993; Read, Loewenstein, and Rabin 1999). However, we can reconcile many of the apparent contradictions by reconsidering the divergence between non-reinvestment and reinvestment environments and their corresponding normative standards. That is, by considering the time-average growth rate, many of the contradictions between prior work and our results melt away. We also place our results within the context of former mechanistic accounts of myopic loss aversion and argue for the importance of including a test block in study designs, especially under reinvestment environments. Our results further add to the understanding of how investors react to losses in reinvestment environments.

Our findings demonstrate that, to communicate effectively with investors, advisors need to understand the environment their investor are in—e.g., whether it is non-reinvestment or (more likely) reinvestment. Advisors should also be able to anticipate how their clients react to those environments—e.g., will they chase losses or follow a momentum strategy. Additionally, advisors need to know what kind of feedback their clients get—e.g., infrequent and sparse or frequent and rich. Furthermore, advisors need to know what investors want from their situation —maximizing expected-value or time-average growth rate.

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This Paper is Not For Everyone:
Message Framing and Perceived Preferences

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EXTENDED ABSTRACT

This research investigates the results of framing marketing communications that emphasize who an offering is NOT for, instead of the more common marketing practice of emphasizing who is a good fit for the offering. We hypothesize that consumers respond more favorably to communications framed to exclude others than otherwise equivalent ads framed to include the target customer.

We propose that a framing effect occurs because communication is encoded relative to different reference points. The inclusionary frame evokes the consumer' attribute preference relative to the group included, whereas the exclusionary frame evokes the consumers' attribute preference relative to the group excluded. Thus, while the same group is rejected, the exclusionary frame makes the group of rejected consumers more salient. We argue that the increased salience of rejected others heightens both idiosyncratic fit and purchase intent. Idiosyncratic fit refers to the "goodness-of fit" between an offering and the consumer's own preferences (Kivetz & Simonson 2003). Previous work on idiosyncratic fit shows that a key factor that affects consumers' response to marketing is the perceived relative fit with consumers' own preferences, where consumers place a significant weight on whether the brand provides a better fit for them than others (Kivetz & Simonson 2003). In our research, we hypothesize that as the consumer is made more aware of others that do not fit with the brand, their own perceptions of fit are heightened.

We propose that consumers respond more favorably to an exclusionary frame for two main reasons. First, exclusionary-framed ads cause consumers to change their inferences about the distribution of the preferences of other customers. Second, the shift in the perceived preferences causes target customers to feel like their preferences are more aligned with the brand than they would otherwise.

Our first experiment tested the theory that exclusionary framing results in higher purchase intent than inclusionary framing. Participants were shown 1 of 3 communications for a sunglass retailer. The ad depicted a "sunglass tint scale" ranging from 0-11 (0-1= no tint, 10-11= very dark tint). In the exclusionary condition, consumers read copy indicating that if their category level was 0-1 or 10-11, the brand is not the right sunglass place for them. However in the inclusionary condition, the ad indicated if their tint level was 2-9, the brand is the right sunglass place for them. We also included a control condition, which made no specific claim to the scale. The data revealed higher purchase intent for the exclusionary condition compared to both the inclusionary and the control ads.

In Experiment 2, we replicated these results using words, rather than a scale. Participants were told about a new food delivery service, and then asked a series of questions about their eating habits. In the exclusionary frame, consumers read ad copy indicating that if they answered yes to the questions, the service "does not want you to use them." However, in the inclusionary frame, consumers were told that if they answered no to all of the questions, the service "wants you to use them." Those who viewed the exclusionary frame reported higher purchase intent (vs. the inclusionary frame).

In Experiment 3, we examined perceived "idiosyncratic fit" compared to the rest of the market. In the context of a chicken wings restaurant, using a (1-10) food spiciness scale with 1= No Taste and 10= RIP Mouth, participants were presented with either an exclu-
sionary frame (if the consumers' preferred spiciness was 1-2 or 9-10, the restaurant was not for them) or an inclusionary frame (if consumers' preferred spiciness was 3-8, the restaurant was for them). Results showed higher purchase intent in the the exclusionary condition and a higher perceived idiosyncratic fit with the brand. Additionally, idiosyncratic fit mediated the relationship between framing and willingness to pay. Experiment 3 also replicated results of previous experiments with higher willingness to pay for the exclusionary frame.

In Experiment 4, we tested the hypothesis that information presented had to reject some group of consumers. We created a 2 Rejection Status (Rejection, Neutral) x 2 Frame (Exclusionary, Inclusionary) design. Participants were shown 1 of 4 conditions in the context of a mattress company named Saatva, using a (1-10) mattress comfort scale with 1=extremely soft and 10=extremely hard. In the rejection conditions, consumers were either shown an exclusionary rejection frame ("if your comfort level is 1-2 or 9-10, Saatva is not for you") or an inclusionary rejection frame ("if your comfort level is 3-8, Saatva is for you."). In the neutral conditions, consumers were either shown an exclusionary neutral frame ("Saatva does not serve comfort levels of 1-2 or-10") or an inclusionary neutral frame ("Saatva does serve comfort levels of 3-8."). An ANOVA including rejection status and frame as predictor variables and purchase intent as the DV revealed a significant interaction. We decomposed the interaction- in the neutral condition, there was no difference between the frames, while in the rejection condition, the exclusionary frame had significantly higher purchase intent. Additionally, results of the previous experiment were replicated; idiosyncratic fit mediated the relationship between framing and purchase intent. Notably, the data revealed moderated mediated, with rejection status moderating the idiosyncratic fit mediator between framing and purchase intent.

In Experiment 5, we examined consumers' perceived distribution of others' preferences. In the context of a coffee shop ad promoting their range of roasts (extremely dark to extremely light), participants were presented with either an exclusionary ad (if consumers wanted extremely dark or extremely light coffee, the brand was not for them) or an inclusionary ad (if they wanted moderately dark to moderately light coffee, the brand was for them). Data revealed consumers viewing the exclusionary ad more strongly endorsed an idiosyncratic fit for themselves, but they were less likely to think that everyone would fit the target market for this company. Perceived distribution mediated the relationship between framing and purchase intent. Experiment 5 also replicated results of previous experiments. Overall, results revealed serial mediation, whereby the consumer perceives a change in distribution of others' preferences, leading to an increase in idiosyncratic fit, and resulting purchase intent.

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Shop Cheap and Look Good: A Signaling Framework

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EXTENDED ABSTRACT

Behaviors violating values upheld by society could lead to stigmatization (Crocker, Major, and Steele 1998) and thus are socially costly, damaging the reputation of the individuals who participate in these stigmatized behavior. For instance, consumers who redeem coupons are perceived to be cheap and subsequently treated as less desirable relationship partners (Ashworth, Darke, and Schaller 2005). The stigma caused by coupon redemption is so strong that it can contaminate the reputations of other unacquainted consumers through mere association (Argo and Main 2008). However, trade reports illustrate nearly 94% of adult U.S. consumers used coupon in 2018, with nearly half of them being frequent users (Valassis 2018). Furthermore, online sites (e.g., *The Penny Hoarder* or Ebates) and mobile apps (e.g., ibotta) have burgeoned in recent years to assist consumers in engaging in a variety of price-saving activities. Interestingly, some price deals and couponing sites, such as one called *Krazy Coupon Lady,* even encourage its users to "brag" about their price victories. It seems contradictory that so many consumers would participate in and even brag about stigmatized price-saving activities (e.g., couponing) when past research has demonstrated the stigma associated with such behavior.

Adopting the costly signaling theory, we propose that price saving behaviors could in fact constitute costly signals that promote these consumers' competence. Specifically, humans, as well as animals, participate in behaviors that cost significant time, energy (e.g., calories), resources (e.g., money or social reputation), or behaviors that give rise to increased risks, to convey honest information about their unobservable yet evolutionarily advantageous qualities (Bellezza, Gino, and Keinan 2013; Grafen 1990; Griskevicius, Tybur, and Van den Bergh 2010; Zahavi 1975). An example would be when consumers engage in conspicuous and luxurious consumption to signal their wealth and resourcefulness (Griskevicius et al. 2010). In this study, we hypothesize that price-saving behaviors act as costly signals that make consumers seem more competent (H1) because these consumers indicate their ability to incur and disregard social cost through voluntarily partaking in these stigmatized behaviors (Bellezza et al. 2013). Moreover, we argue that price saving behaviors involve consumers actively searching for price-saving information (Mano and Elliott 1997); this repeated process could allow consumers to acquire skills to approach novel and difficult challenges in the financial domain (i.e., financial efficacy), which should contribute to the overall competence perception of the consumers (*H2*). In addition, to provide evidence supporting price-saving indeed comprises a costly signal that *honestly* promotes senders' unobservable traits (i.e., competence), we hypothesize that the signal must be able to be decoded correctly by observers (*H3*) and the senders must be believed to possibly possess the associated trait (*H4*). In four studies, we provide support for our hypotheses.

Study 1 tested our main prediction: engaging in price saving behaviors makes consumers seem more competent because they "beat the system". In study 1a, undergraduate students (n = 165) participated in a 2(purchase: price-saving vs. sticker-price) between-subjects experiment, in which they viewed a Facebook post about a laptop purchase. The consumer on the Facebook page was either described as loving coupons and the focal laptop purchased was made with a 10% off coupon (price-saving condition), or as enjoying sharing information about her purchases and the laptop was not purchased with a coupon (sticker-price condition). Participants indicated the degree to which they found the consumer to "*beat the system when she shops*", and whether they found her to be stigmatized (*cheap, stingy, & a penny-pincher,* 1 = not at all; 7 = extremely, α = .93). Consistent with prior literature (Argo and Main 2008), the consumer in the profile was stigmatized more when she engaged in price-saving ($M = 4.10$) than not ($M = 2.52$, $F(1, 163) = 64.83$, $p < .001$). Importantly, participants believed that the consumer beat the system when demonstrating price-saving behavior($M = 4.36$) than when she did not ($M = 3.49$, $F(1, 163) = 10.19$, $p < .01$), supporting our main hypothesis (*H1*).

Study 1b replicated the focal effect in a different context (i.e., Instagram and household good). In addition, we measured the overall competence used commonly to form people impression (Cuddy, Fiske, and Glick 2008a, b). Participants (n = 231 undergraduates) viewed either an Instagram profile of a consumer who enjoys sharing information about her purchases with (price-saving condition) or without (sticker-price condition) coupons and price promotions. Nine thumbnails of recent purchases appeared on the main profile page. In the price-saving condition, five thumbnails included imagery portraying the consumer as someone who constantly engages in price saving activities (such as coupons and sales). In the sticker-price condition, the same purchased products were featured but without these price-saving elements. Participants then reviewed a post of her recent liquid detergent purchase. In the price-saving condition an image of a coupon, along with the phrase "Time searching for coupons pays off!!" and price saving hashtags including #why.pay.full.price? were added. Subsequently, participants indicated their perceptions of the consumer's competence: "*competent, intelligent, & confident* (α = .77)" and stigma: "*cheap, stingy,* and a *penny-pincher* (α = .93)", on 7-point scales (1 = not at all; 7 = extremely). Results showed the consumer was stigmatized ($M_{price-saving} = 3.80$ vs. $M_{sticker-price} = 2.23$, $F(1, 229) = 80.06$, $p < .001$) but perceived as more competent ($M_{price-saving} = 4.71$ vs. $M_{sticker-price} = 4.18$, $F(1, 229) = 11.47$, $p < .001$) when engaged in price-saving behavior.

Study 2 investigated the process through which price saving activities enhances observers' competence impression. Specifically, we tested whether the improved skills in coping with novel and difficult financial challenges (i.e., financial efficacy) mediates the observed effect of price-saving on consumers' competence (*H2*). Participants (n = 140 undergraduates) viewed the same Instagram profiles from Study 1b and reviewed five posts of purchases in various product categories. Participants then rated the consumer's financial efficacy (i.e., 10 items, adopted from Schwarzer and Jerusalem 1995) on 7-point scales and the same items from study 1b of stigma (α = .87) and competence (α = .73). To test whether price-saving could affect social media behavior, participants also indicated how much they were willing to follow and like the consumer's Instagram page (3 items, α = .73). Results demonstrated that the price-saving consumer was indeed stigmatized ($M_{price-saving} = 3.92$ vs. $M_{sticker-price} = 3.01$, $F(1, 138) = 16.24$, $p < .001$). Participants also perceived the price-saving consumer to be more financially efficacious ($M_{price-saving} = 4.28$ vs. $M_{sticker-price} = 3.87$, $F(1, 138) = 6.94$, $p < .01$) and more competent

($M_{price-saving}$ = 4.73 vs. $M_{sticker-price}$ = 4.27, $F(1, 138)$ = 6.07, $p < .05$). Additionally, participants reported being more willing to like and follow the price-saving consumer's Instagram page ($M_{price-saving}$ = 2.14 vs. $M_{sticker-price}$ = 1.73, $F(1, 138)$ = 4.22, $p < .05$). A serial mediation with 5000 bootstrap samples (Zhao, Lynch, and Chen 2010) showed that participants' decision to engage with the consumer on Instagram (through liking and following) was a function of her perceived competence and her financial skill due to price saving behaviors (i.e., price saving→financial efficacy→competence→ Instagram engagement; b = 0.29, 95% CI of indirect effect [0.07, 0.36], $p < .05$), supporting *H2*.

Study 3 tested an important boundary condition for our prediction. If stigmatized price-saving behaviors are indeed costly signals, they must *honestly* signal unobservable traits of the senders (Grafen 1990; Loyau et al. 2005). Therefore, when a sender has an ulterior motive, it makes the signal noisy and harder for the signal to be accurately decoded by perceivers to make inferences about the sender (*H3*). To test this, we added an additional condition (i.e., disclaimer), in which the focal consumer indicated that she was paid by brands to post her purchases with price-saving activities. We predict that brand sponsorship will negate the ability of price-saving behaviors to be seen as costly signals of competence. Undergraduates (n = 114) participated in a 3(purchase: organic price-saving vs. disclaimer price-saving vs. sticker-price) between-subjects experiment. The same stimuli from study 2 was used for the organic price-saving and sticker-price condition. In the disclaimer condition, participants were informed that the consumer frequently makes sponsored posts and hashtags such as #sponsored were used. Participants indicated the consumer's financial efficacy (2 items, r = .67, $p < .001$), competence (α = .74), and stigma (α = .85) on the same items used in previous studies. The consumer was stigmatized to the same extent when she engaged in price saving behaviors regardless whether the posts were organic (M = 4.09) or sponsored (M = 3.97, $p > .5$), and both conditions were stigmatized to the greater extent compared with the sticker-price condition (M = 2.62, $ps < .001$). Supporting *H3*, the consumer was once again perceived as more competent due to her price-saving behaviors but only when the posts were organic ($M_{organic}$ = 5.17 vs. $M_{sticker-price}$ = 4.61, $p < .001$). When posts were sponsored, the competence perception was lower than in the organic condition ($M_{disclaimer}$ = 4.51 vs. $M_{organic}$ = 5.17, $p < .01$), and did not differ from the sticker-price condition (vs. $M_{sticker-price}$ = 4.61, $p > .5$). Similar effects were found for financial efficacy ($M_{organic}$ = 5.13 vs. $M_{disclaimer}$ = 4.43, $p < .01$; $M_{organic}$ = 5.13 vs. $M_{sticker-price}$ = 4.22, $p < .001$). The sticker-price and disclaimer conditions did not differ. Mediation analyses with a multi-category independent variable showed financial efficacy mediated the effect of organic price-saving behaviors contrasted with sticker-price (95% CI of the indirect effect [0.21, 0.77]). The indirect effect of disclaimer was not significant compared with the sticker-price (95% CI of the indirect effect [-0.13, 0.36]).

Study 4 tested another boundary condition to provide further evidence suggesting that price-saving behaviors serve as costly signals. If costly signals honestly advertise senders' desirable, imperceptible traits, then only senders who are conventionally believed to possess that trait could deliver effective costly signals (*H4*). Higher SES individuals are stereotypically believed to be competent, whereas people with lower SES are largely believed to lack such desirable trait (Cuddy et al. 2008a); therefore, a costly signal should only honestly advertise and enhance the competence of the higher (but not lower) SES senders. Furthermore, this study looks at downstream spillover effects from the consumer to the brands featured in her posts. Adults from Amazon's Mechanical Turk (n = 204) participated in a 2 (purchase: price-saving vs. sticker-price) x 2(SES: higher vs lower) between-subjects design, in which they read about a consumer profile of either a higher- or lower-SES shopper (i.e., a physician with a M.D. or a waitress with a high school degree), who either engaged in price-saving behaviors or not. We further removed the social media element from the stimuli to test whether our results still hold in a less contextualized environment. Participants rated how much they found the consumer to be competent on the same items as in previous studies (α = .89) and rated the brands purchased by the consumer (i.e., attitude & liking, r = .49, $p < .001$). Consistent with our predictions, the higher-SES consumer was seen as more competent in the price-saving condition ($M_{price-saving}$ = 6.13 vs. $M_{sticker-price}$ = 5.53, $t(200)$ = 3.17, $p < .01$). This difference did not occur for the lower-SES consumer ($M_{price-saving}$ = 4.78 vs. $M_{sticker-price}$ = 4.81, $t(200)$ = 0.018, $p > .5$). Additionally for the higher-SES consumer, the brands were more liked when she used price-saving behaviors ($M_{price-saving}$ = 6.06 vs. $M_{sticker-price}$ = 5.61, $t(200)$ = 2.31, $p < .05$). This positive response was not observed for the lower-SES shopper ($M_{price-saving}$ = 5.72 vs. $M_{sticker-price}$ = 5.89, $t(200)$ = 0.67, $p > .5$). Moderated mediation analysis (Zhao et al. 2010) found that the conditional indirect effect of price-saving on brand attitude was mediated by competence perceptions for the higher- (b = .36, 95% CI of the indirect effect = [.16, .57], $p < .01$) but not lower-SES shopper (b = -0.04, 95% CI of the indirect effect = [-.23, .16], $p > .5$). Together, the results confirm that price-saving is perceived as an honest costly signal only for consumers who are believed to possess competence traits. These perceptions can subsequently spillover to positive attitudes towards the featured brands.

In conclusion, this research contributes to understanding the downstream effect of stigmatized price saving behaviors on impression formation of consumers who participate in these behaviors by increasing financial efficacy and thus perceptions of competence. Furthermore, these impressions can spillover to create positive attitudes towards the brands that price-saving consumers purchase. We demonstrate the impact of price-saving on perceptions of consumers' competence only occurs when the consumer does not have ulterior motives for these behaviors (study 3) and is believed to possibly possess these traits (study 4). Our results provide important managerial implications such that price promotions discussed by bloggers could improve brand attitudes but only when they are made in an organic way.

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Effects of Recipients' Negative Facial Expressions on Donors' Preference Between Survival Helping and Developmental Helping

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EXTENED ABSTRACT

Traditionally, a large amount of donations have been used to provide people in need with goods that fulfill their survival needs (e.g., necessities and medicines; Gershon and Cryder 2018; Lee, Winterich, and Ross 2014; Lee, Bolton, and Winterich 2017). Nowadays, it has been increasingly popular for governments and non-profit organizations to dedicate charity donations to training and education programs for the underprivileged group or microloans to the poor (Berman et al. 2018; Galak, Small, and Stephen 2011; Genevsky and Knutson 2015; Herzenstein, Sonenshein, and Dholakia 2011; Lee, Bolton, and Winterich 2017; Simpson, White and Laran 2017; Williams and Drolet 2005), which emphasize people's potential for growth and needs for self-development.

This research focuses on the difference between helping that fulfills people's development needs (hereafter as developmental helping) and helping that fulfills people's survival needs (hereafter as survival helping). We examine how emotional expressions of people in need influence these two types of helping. Specifically, we propose that compared to positive emotional expressions, negative emotional expressions of a recipient will make donors less optimistic about the recipient's future, thus perceive the recipient to have a higher need for survival helping but a lower need for developmental helping, and ultimately more willing to donate money to satisfy the recipient's survival needs but less willing to donate money to satisfy the recipient's developmental needs.

Study 1 ($N = 440$) adopted a 3 (emotional expression: positive, negative, vs. neutral) × 2 (helping: developmental vs. survival) between-subjects design. Participants viewed either a positive, a negative, or a neutral expression of African children and evaluated the child they viewed in terms of either perceived need for food or perceived need for books. Books (vs. food) were used to operationalize developmental (vs. survival) helping. The two-way interaction is significant ($F = 11.85$, $p < .001$). Specifically, negative expression increased perceived need for survival helping compared to positive ($t = 2.16$, $p = .032$) and neutral expressions ($t = 3.05$, $p = .002$), and there was no difference between positive and neutral expressions ($t = 1.00$, $p = .321$). In contrast, negative decreased perceived need for developmental helping compared to positive ($t = -4.04$, $p < .001$) and neutral expressions ($t = -2.71$, $p = .007$), and there was no difference between positive and neutral expressions ($t = 1.22$, $p = .224$).

Study 2 ($N = 745$) tested the mediating role of optimistic belief with a 2 (emotional expression: positive vs. negative) × 2 (helping: developmental vs. survival) between-subjects design. Participants viewed either a positive or a negative expression of African children, rated either perceived need for food or perceived need for books of the child they viewed, and indicated how optimistic they were about the child's future. The two-way interaction is significant ($F = 30.05$, $p < .001$). Replicating Study 1, negative expression increased perceived need for food ($t = 2.30$, $p = .022$) but decreased perceived need for book ($t = -5.49$, $p < .001$). Furthermore, a moderated mediation with optimistic belief as the mediator and helping domain as the moderator is significant (95%CI: -.70, -.28). Specifically, negative (vs. positive) expression reduced optimistic belief ($F = 122.54$, $p < .001$), which further mediated the effects of negative (vs. positive) expression on perceived need for books (95%CI: -.46, -.14) and for food (95%CI: .05, .35) in opposite directions.

Study 3 ($N = 595$) demonstrated a downstream consequence of emotional expressions in terms of donation preference and provided further evidence for the proposed optimistic belief mechanism by manipulating the process variable. This study adopted a 2 (emotional expression: positive vs. negative) × 2 (message framing: concerned vs. optimistic) between-subjects design. We created a charity ad, in which we used two pictures of the same girl to manipulate emotional expression. In the charity ad, a slogan underneath the girl image was framed as "Be concerned about these girls. They will have a decent life" in the concerned condition and "Be optimistic about these girls. They will have a bright future" in the optimistic condition. After viewing the charity ad, participants completed a bipolar scale measuring their relative donation preference between food (1) and books (8). There is an emotional expression × message framing interaction on donation preference ($F = 3.32$, $p = .069$). Compared to positive expression, negative expression decreased participants' preference for developmental helping over survival helping in the concerned condition ($M_{negative} = 3.15$ vs. $M_{positive} = 3.78$; $F = 7.16$, $p = .008$) but not in the optimistic condition ($M_{negative} = 3.53$ vs. $M_{positive} = 3.55$; $F = .01$, $p = .930$).

Study 4A ($N = 358$) generalized the effects to adult recipients. Participants were randomly assigned to view either a positive or a negative expression of the same female and then completed a bipolar scale measuring their relative donation preference between an assistance program providing basic daily necessities (1) and an assistance program providing training courses (8). Compared to positive expression, negative expression decreased participants' preference for developmental helping over survival helping ($F = 5.82$, $p = .016$). Study 4B examined actual donation behavior, with 158 Hong Kong undergraduates allocating 15 HK dollars (about two U.S. dollars) between book purchase and food purchase for a girl. One half of participants viewed a picture in which a girl looked sad, while the other half viewed another picture in which the same girl looked happy. Compared to positive expression ($M_{book} = 7.25$HKD vs. $M_{food} = 7.72$HKD), negative expression ($M_{book} = 5.92$HKD vs. $M_{food} = 9.08$HKD) decreased participants' relative allocation of money to book purchase over food purchase ($F = 8.76$, $p = .004$).

This research extends the literature by distinguishing between developmental helping and survival helping, by showing how emotional expressions of a recipient influence donors' relative preference between these two types of helping, and by demonstrating optimistic belief as the underlying mechanism.

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When Scarcity Mind-set Promotes Prosocial Behaviours: A Waste Reduction

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EXTENDED ABSTRACT

Experiences of scarcity are ubiquitous and have profound influences on consumers (Hamilton, Mittal, Shah, Thompson, and Griskevicius 2018). When consumers experience shortages of resources relative to their needs, they draw attention to the limited resources, focus on self and reduce spending resources on others. Therefore, scarcity disposes consumers towards selfish acquisitions of resources and decreases their prosocial tendency (Holland, Silva, and Mace 2012; Petersen, Aarøe, Jensen, and Curry 2014; Roux, Goldsmith, and Bonezzi 2015).

The current research reexamines the relationship between scarcity and prosociality. We contend that the motivation to conserve resources is an important psychological reality that accompanies scarcity (Haushofer and Fehr 2014; Shah, Shafir, and Mullainathan 2015). When a waste concern is present, the increased waste reduction motivation might override the self-interest motivation and lead consumers to conserve resources even when doing so benefits others at a cost of self, a tendency that manifests .

We further propose the type of cost (i.e., money versus time) to be a moderator. Monetary cost is generally more countable and construed more concretely than temporal cost (Macdonnell and White, 2015; Okada and Hoch 2004). Besides, money is the major and primary resource to cope with scarcity because it can exchange for many other types of resources. Thus, consumers with scarcity mind-set might be more sensitive to monetary cost than to temporal cost. Consequently, scarcity mind-set might promote altruistic behavior when it takes time to reduce waste, but less so (or even reversed) when it takes money.

Seven studies examine the hypotheses. Before the focal studies, we tested the association between scarcity and waste reduction motivation by the World Values Survey (WVS; Inglehart et al. 2014) and found that relative income negatively predicted intentions of saving resources, $b = -.02$, $p = .001$, 95%CI = (-.0341, -.0094), suggesting a positive relation between scarcity and intentions of saving resources.

Studies 1 to 3 tested whether activating scarcity mind-set would increase the motivation to reduce waste and protect resources. Study 1 manipulated scarcity mind-set by asking participants to recall a personal experience that they did not have enough resources (Roux et al. 2015), which was also used in the following Studies 2 to 5. Afterwards, participants joined a taste-drink task and received two cups of lemon tea, one was large (470 ml.) and one was medium (320 ml.). Participants only chose one cup to drink and could not take away the leftover tea. Supporting the hypothesis, the proportion of choosing the large cup in the scarcity condition (31.11%) was significantly lower than that in the control condition (60.42%), $\chi^2(1) = 8.02$, $p = .005$. Participants in Study 2 first finished the scarcity manipulation. Then they read a scenario in which they could receive a free but redundant shopping bag from a supermarket. Activating a scarcity mind-set significantly decreased participants' tendency to take the free bag, $t(104) = -2.11$, $p = .014$, $d = 0.49$.

Study 3 adopted a 2 (mind-set: scarcity or control) × 2 (charity causes: reduce waste or promote healthy habits) between-participants design. After finishing the scarcity manipulation, participants read that a charity organization is recruiting volunteers to distribute flyers that remind people to reduce waste or to have healthy habits. Participants indicated their willingness to work as a volunteer.

Activating scarcity mind-set significantly increased participants' intention to distribute flyers that call for reducing waste, $F(1, 216) = 8.57$, $p = .004$, $\eta^2 = .04$, but did not change volunteer intention when the flyer was about promoting healthy habits, $F(1, 216) = 0.01$, $p = .935$. Thus, the altruistic decision resulting from scarcity mind-set is restricted to the waste reduction domain.

Studies 4 and 5 examined whether scarcity mind-set would promote altruistic behaviors that benefiting potential others at a cost of self when a waste concern was present. Participants in Study 4 first finished scarcity manipulation and then made decision in a scenario that they could either spend efforts to donate some old books to the library or throw them to the rubbish bin. Participants in the scarcity condition reported higher donation likelihood than those in the control condition, $t(122) = 2.32$, $p = .022$, $d = 0.41$.

Study 5 adopted a 2 (mind-set: scarcity or control) × 2 (waste concern: present or absent) between-participants design. The whole procedure was identical to Study 1. The main difference is that they received two boxes of biscuits rather than drinks, one was large (45 g) and one was small (20 g). Participants in the waste concern *present* (*absent*) condition read that they *cannot* (*can*) take away the leftover biscuits. They were informed that they could only choose one box to taste and the other would be left to the following participants. Activating scarcity mind-set increased the choice of large box when the waste concern was absent, $\chi^2(1) = 5.17$, $p = .023$, but decreased the choice of large box when the waste concern was present, $\chi^2(1) = 5.79$, $p = .016$.

Studies 6 and 7 tested the moderation of cost type and adopted a 2 (mind-set: scarcity or control) × 2 (cost: time or money) between-participants design. Two studies used the same scarcity mind-set manipulation. Specifically, participants either listed things they would not be able to do if five resources were unavailable (*scarcity* condition) or three things they could do with these resources (*control* condition). Afterwards, participants in Study 6 imagined that they could donate some old books to a local library by either spending 30 minutes or $10. Study 7 used another scenario about spending money or time to reduce food waste in the campus. Two studies consistently found that activating scarcity mind-set increased altruistic decision when the cost was time, ps < .038, but decreased it when the cost was money, ps < .195.

The current research indicates that scarcity could increase prosocial tendency, a positive-tuned consequence. Our findings suggest that the effects of resource scarcity on decision making may be more complicated than extant literature suggests and warrant further investigations.

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The Role of Power Distance Belief in Consumers' Preference for Brand Logo Designs

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EXTENDED ABSTRACT

A brand logo reflects a brand's face and is an indicator of its personality and identity (Lury 2004). Therefore, logo designs often affect brand perception as well as corporate imagine (Hagtvedt 2011; Henderson and Cote 1998). Logos from the Nike's swoosh to Starbucks' twin-tailed mermaid and McDonald's arches have immensely contributed to brand recognition and profits (Park et al. 2013). Not surprisingly, firms spend millions to create the perfect logo – one that is memorable and captures the essence of the product (Appleton 2014). Given the importance of brand logos and the vast sums involved in creating them, managers are continuously striving to understand factors that influence the success of logos.

Surprisingly, limited research has explored the influence of consumers' cultural orientation on brand logo design preference. In this research, we introduce a novel concept – the ratio of brand logo size to the empty space surrounding it (LES ratio) and show that preference for it significantly varies by consumers' cultural orientation, power distance belief (henceforth, PDB) – the acceptance and endorsement of inequalities and hierarchies (Hofstede 1984, 2001; Zhang, Winterich, and Mittal 2010). Specifically, we propose that consumers high (vs. low) in PDB prefer a larger LES ratio based on their preference for empty space around brand logos.

We base these predictions on emerging evidence suggesting that In high PDB societies, individuals endorse inequality and hierarchy, whereas in low PDB societies, individuals believe in equality and in the absence of hierarchy. Previous research suggests that a greater social mobility exists in low (vs. high) PDB cultures and that moving between social classes is a norm in low (but not in high) PDB cultures (Hofstede 2001; Carl et al. 2004). In low PDB cultures, there is a large middle class, the majority of the society has equal rights, and people can make changes to their lives (Carl et al. 2004; Hofstede 2001). Conversely, high PDB cultures involve a small upper class and a large majority of lower-class citizens where the majority is forced to accept high power distance and a rigid class structure because of its inability to make substantial changes to its future (Carl et al. 2004). Furthermore, high (vs. low) PDB individuals have a greater need for structure (Carl et al. 2004; Lalwani and Forcum 2016; Hofstede 2001) because of their focus on the social hierarchy and are thus likely to seek clarity and avoid ambiguity (Neuberg and Newsom 1993; Thompson et al. 2001). Based on these research findings, we suggest that high (vs. low) PDB individuals are more likely to be more rigid and less comfortable with change.

How may PDB affect consumers' preference for logo designs? We posit that the answer resides in the effects of empty space surrounding logo pictures. The research on the effect of empty space in a consumer context suggests how empty space around pictures or text may affect consumers' evaluations of products (Jacobs 1972; Jacobs and Poillon 1992; Kwan, Dai, and Wyer, Jr. 2017; Pracejus et al. 2006; Pracejus, O'Guinn, and Olsen 2013). For example, Pracejus et al. (2006) found that surrounding the pictures of a product with empty space increases the perception of the product's prestige, and these perceptions are culturally bound (Pracejus et al. 2013). Kwan et al. (2017) found that surrounding text messages by empty space makes the message less persuasive. Therefore, the empty space around pictures or text can meaningfully shift perceptions. Accordingly, we predict that a small amount of empty space around brand logo pictures (i.e., a high LES ratio) signals structure and stability. Our prediction is based on evidence from existing research. For example, Hara (2015) suggests that empty space give people the freedom to edit. The empty space around pictures signals upward mobility or movement (Sennett, 1990). Research on physical space also shows that high ceiling tend to make people feel open and free, whereas low ceilings tend to make people feel confined and inhibited (Hall & Gay 1996; Levav and Zhu 2009). Because high (vs. low) PDB consumers are more rigid and less comfortable with change, they are more likely to prefer high LES ratios because their preference for a small amount of empty apace around brand logos.

Using three laboratory studies, we provided converging evidence for our hypotheses. In Study 1, we found that high (vs. low) PDB consumers chose the handbag with a higher LES ratio using a regression analysis (β = .25, $t(105)$ = 2.61, p < .02). Further, this effect remained significant (β = .25, $t(104)$ = 2.57, p < .01) when the covariate need for status was included in the model. In this study, we also ruled out the role of need for status as an alternative explanation (β = .001, $t(104)$ = .01, p = .99).

In Study 2, we replicated our main effect and found that high (vs. low) PDB was positively associated with consumers' choice of footwear logos with a higher LES ratio (β = .17, $t(119)$ = 1.89, p = .06). We further tested the predicted pathway (PDB –>preference for empty space –> logo choice) using a mediation model (PROCESS model 4, Hayes 2013), which shed light on the underlying processes of our main effect. A bootstrap analysis with 10,000 iterations indicated that the full serial mediation model was significant (indirect effect = .15, SE = .06, 95% CI = .0311 to .2700).

In Study 3, we examined a moderator that sheds light on the mediator, preference for empty space around brand logos. In addition, we also examined whether consumers' attitude toward a brand is affected by the logo design. A general linear model with attitude toward the brand measure (standardized) as the dependent variable, small (vs. large) logo size, add (vs. no-add) condition, as well as PDB measure (standardized), and all the two-way and three-way interactions as the dependent variables revealed a significant three way interaction of all three independent variables ($F(1, 83)$ = 3.78, p = .05). The significant three-way interaction suggested that the interactive effect of PDB and logo size on brand attitude is dependent on whether images and texts can be added to the blank space around brand logos. The same model also revealed a significant two-way interaction between add (vs. no-add) condition and PDB ($F(1, 83)$ = 3.77, p = .05) and a marginally significant two-way interaction between logo size and PDB ($F(1, 83)$ = 2.96, p = .09). All other effects were not significant (ps > .21). Furthermore, we conducted two floodlight analyses in the small and large logo conditions. In the small logo condition, we found that there was a significant positive effect of control (vs. no-add) condition on brand attitude for participants whose PDB score was more than 3.71 (B_{JN} = .33, SE = .16, p < .001), but not for those whose power distance belief score was less than 3.71. These results suggest that high PDB individuals' attitude toward small tide logo was more positive in the no-add (vs. control) condition, which supported our prediction. Also as predicted, we did

not find that PDB affected people's attitude toward large logo design in the control (vs. no-add) condition.

Our findings make several theoretical and managerial contributions. Theoretically, our research is the first to propose the notion of LES ratio in brand logo design. It is also the first to bring PDB to the emerging literature on brand logo size preference. Third, we showed that the path from PDB to preference for LES ratio runs through entity and incremental theories. Fourth, our research provides initial evidence supporting a more direct relationship between implicit self-theories and brand personalities.

Managerially, our findings may guide managers of global brands to include large logo pictures relative to the surrounding empty space on products in high (vs. low) PDB countries. Furthermore, past research suggests that consumers' implicit-theories can be situationally activated (Yorkston et al. 2010). Therefore, our results suggest that managers can influence consumers' preference of logo designs by manipulating their implicit-theories. Lastly, this research links the amount of blank space in logo designs with brand personality. Managers may use this information to create the desired brand personalities.

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Making Connections:
The Influence of Event Sequence on the Evaluation of Extraordinary Experiences

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EXTENDED ABSTRACT

Imagine a trip that involves wildlife conservation (e.g., species data collection, habitat repair) combined with a wellness retreat (e.g., meditation, massage, yoga). Conservation activities may be scheduled with more alternation (i.e., wellness, conservation, wellness, conservation) or with less alternation (i.e., wellness, wellness, conservation, conservation). The events make this experience less common and not part of daily life for most people (Bhatttacharjee and Mogilner 2014; Zauberman, Ratner, Kim 2009). In comparison, research on event sequencing and variety seeking has involved ordinary experiences, finding that consumers prefer sequences with alternating events (e.g., rock song, country music, rock song, country music), because consumers perceive greater variety (e.g., Kahn and Wansink 2004) or anticipate less satiation (e.g., Redden 2008) with these alternating sequences. Our focus on *extraordinary* experiences and attention to thematic thinking research, however, suggests there are important and different reasons for this alternation preference.

With three studies involving multiple extraordinary experiences, we find that extraordinary (versus ordinary) experiences that are sequenced with more (versus less) alternation are evaluated more positively by consumers. This is because consumers identify and make novel connections between individual events if the context enables thematic thinking. For example, a trip to a foreign city may be advertised as an opportunity to learn about the historic and modern aspects of the city. With this example, a temporal thematic relation is communicated to consumers, and the events are construed as having different roles in the experience: increasing appreciation and knowledge of either the historic or modern aspects of the city. As suggested *indirectly* from the thematic thinking literature (Estes, Golonka, and Jones 2011; Lin and Murphy 2001), relational information may facilitate identification of additional connections among events – connections that are spatial, functional, economic, and/or affective. With our example, if historic and modern events are sequenced back and forth (e.g., historic, modern, historic, modern), we expect that consumers are likely to perceive more detailed connections between individual events, as there are more opportunities for them to do so. In contrast, if events from the same category (e.g., historic, historic, modern, modern) are sequenced one after another, consumers may perceive fewer connections.

In study 1, participants (N=110) evaluated a French Festival event in a between-subjects design. The festival was composed of three films (different genres) and three acrobatic shows (different themes) that were sequenced with more or less alternation. In the festival brochure, we included information that suggested events may be thematically related. Supporting our expectations, more (versus less) event alternation was perceived more favorably to consumers.

In study 2, we manipulated thematic thinking through the use of more versus less complementary labels in a city trip. A total of 177 individuals participated in this 2 (event alternation: more vs. less) × 2 (event category label: more complementary vs. less complementary) between-subjects study. The trip consisted of four tours. In the more complementary label conditions, the tours were categorized as *historic* and *modern*, highlighting a temporal relation among events, whereas in the less complementary label conditions, the same tours were categorized as *feeling* and *experiencing* the city. We expected

that making a temporal connection salient with thematically related category labels would lead to the identification of greater number of event connections with more (versus less) event alternation. In addition, we measured participants' variety perceptions of the trip to see if it could alternately explain the hypothesized event sequencing effect. Supporting our expectation, more (versus less) event alternation was preferred, but only when thematic thinking is salient, as with the use of category labels that suggest temporal connections between events. More importantly, connection perception, but not variety perception, was found to mediate this preference.

In the first two studies, we have assumed the experience are extraordinary – unusual and/or not frequently consumed in everyday life. Nonetheless, in study 3, we manipulated extraordinariness to confirm that this characteristic contributes to the identification of event connection in multi-event experiences. In addition, we would like to investigate whether anticipated satiation could alternatively explain the hypothesized effect. A total of 200 individual participated in this 2 (event alternation: more vs. less) × 2 (experience type: extraordinary vs. ordinary) between-subjects study. In the extraordinary conditions, participants imagined a scenario where they were considering a weekend trip to a nearby city. In the ordinary experience conditions, participants imagined a scenario that involved watching a new Netflix series with documentaries that corresponded to the events in the city trip. The tours and documentaries were categorized with thematically related labels, *historic* and *modern*, as in study 2, and were sequenced with more or less alternation. As expected, more event alternation was preferred, but only for extraordinary experiences. Again, connection perception was found to mediate the preference, whereas anticipated satiation could not explain the hypothesized effect.

Theoretically, we extend research on event sequencing, variety seeking, and satiation by identifying extraordinariness as an important contextual factor that, when taken into consideration, suggests a novel driver of experience evaluation – connection identification. We also demonstrate that thematic thinking influences connection identification among events in an experience. Similar to prior research, we find that consumers pay attention to how experiences are categorized, but drawing consumers' attention to how events may be thematically connected is novel to our investigation. Finally, we offer practical guidance on how marketers should categorize and sequence events when advertising extraordinary experiences.

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Disorder and Downsizing

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EXTENDED ABSTRACT

Consumers often need to downsize. Despite its growing importance, research on downsizing is surprisingly scant. The present research examines the impact of dis/order (tidy vs. messy) and decision strategy (selecting vs. rejecting) on downsizing effectiveness.

A short lay beliefs survey with students (n= 172) supported the seemingly sensible strategy to reject items from a tidy environment as the best way to downsize. In contrast to lay beliefs, literature on decision-making suggests that rejection (vs. selection) may be *less* effective (see Levin and colleagues (1998, 2001, 2002); Park et al. 2000) in reducing consideration sets. Others (Kahn and Wansink 2004) have found that disorder may affect choice set size. In the present work, we reason that because selection focuses attention on positive features (Shafir 1993) and positive features may be harder (easier) to recognize under disorder (order), selection may undermine (facilitate) inclusion in the choice set and help the downsizing effort. Additionally, we hypothesize disorder (order) may enhance the use of alternative-based (attribute-based) processing, making it more difficult to identify the best options for inclusion in the retained set. Together, this reasoning predicts that consumers will retain fewer items when selecting items from disorder.

STUDY 1: REAL BEHAVIOR

Students (n=251), while moving out of their standard dorm rooms, were asked what percentage of their total belongings they had kept when moving out and how messy or tidy their room was before packing. A regression analysis revealed that the proportion of belongings kept was negatively associated with disorder (p= .01). This finding provides correlational evidence that disorder facilitates downsizing in real behavior.

STUDY 2: SELECTING/REJECTING FROM DIS/ORDERED CLOTHING

Study 2 investigates whether the strategy used for downsizing interacts with dis/order of the environment. Students (n= 171) imagined they were studying abroad and could only bring about half of their clothes in a 2 (dis/order: tidy vs. messy) x 2 (strategy: select vs. reject) design. ANOVA of the final number of items retained revealed a main effect of select/reject strategy and dis/order, qualified by a two-way interaction (ps < .001). When rejecting, the final number of items did not differ (M_{tidy}= 28.84 vs. M_{messy} = 29.43, p= .29). However, when selecting, participants kept more when belongings were tidy (M_{tidy}= 25.45 vs. M_{messy}= 21.26, p < .001). As predicted, disorder aided downsizing under a select strategy.

STUDY 3A: REAL CHOICE

Study 3A sought to replicate the findings using an incentive-aligned downsizing task. Students (n= 101) imagined they had taken a trip to the beach and needed to downsize residual saltwater taffy pieces. The taffy was presented to each participant ordered by flavor (tidy) or not (messy). Participants selected candies from the box and put them in a snack bag to take with them. As predicted, participants took more candies in the tidy condition (M_{tidy}= 10.75 vs. M_{messy}= 8.94, p= .05). Disorder helped downsizing in an incentive-aligned task.

STUDY 3B: HYPOTHETICAL CHOICE

Study 3B extends study 3A with students (n=222) participating in a 2 (strategy: select vs. reject) x 2 (dis/order: messy vs. tidy) and used the same scenario. ANOVA of the final number of items retained revealed a main effect of dis/order and strategy, qualified by their two-way interaction (ps < .001). When rejecting, dis/order had no effect on candy retained (M_{messy}= 23.18 vs. M_{tidy}= 22.36, p= .47). When selecting, participants kept more candies in the tidy condition (M_{tidy}= 18.78 vs. M_{messy}= 10.04, p < .001).

STUDY 4: ATTRIBUTE VERSUS ALTERNATIVE-BASED PROCESSING

Study 4 examines process by measuring alternative (vs. attribute) processing and focus on the positives. Students (n=241) selected or rejected as many clothing items (n=50) as they wanted in a 2 (strategy: select vs. reject) x 2 (dis/order: tidy vs. messy) design. After completing the downsizing task, participants rated whether they engaged in alternative versus attribute-based processing (1= definitely alternative-based, 7= definitely attribute-based), to what degree they had focused on the positives (1= not at all, 7= very much), and how satisfied they were with their final choices (1= dissatisfied, 7= satisfied; 1= disappointed, 7= pleased; 1= regretful, 7= no regret).

ANOVA of the number of items retained showed main effects of strategy and dis/order, qualified by their two-way interaction (ps < .003). When rejecting, there was no difference in the number of items retained (M_{messy}= 27.23 vs. M_{tidy}= 26.15, p= .27). When selecting, participants retained more items in the tidy condition (M_{tidy}= 24.08 vs. M_{messy}= 18.54, p < .001).

ANOVA of processing approach yielded a marginal interaction of strategy and dis/order (p= .08). When selecting, tidiness led to more attribute-based processing (M_{tidy}= 4.37 vs. M_{messy}= 3.69, p= .03). Focusing on the positives produced significant main effects of dis/order and strategy (ps < .04) with tidiness and selection leading to greater focus on positives(M_{tidy}= 5.48 vs. M_{messy}= 5.03; M_{select}= 5.57 vs. M_{reject}= 4.96, respectively). The interaction was not significant.

Analysis supports moderated mediation in parallel by alternative/attribute processing and a focus on the positives of items retained. The indirect effect of processing was supported under selection (PROCESS model 59, b= 0.52, SE= 0.35, BC 90% CI= [0.05, 1.16]), but not rejection. Focusing on the positives was supported when selecting (PROCESS model 59, b= 0.41, SE= 0.28, BC 90% CI= [0.02, 0.92]), but not rejection. Together, selecting from an ordered assortment undermines downsizing due to using attribute-based processing and focusing on the positives.

Finally, ANOVA of the satisfaction index (α= .875) revealed a significant interaction of strategy and dis/order (p= .04). When rejecting, dis/order had no effect on satisfaction (M_{messy}= 5.40 vs. M_{tidy}= 5.50, p= .58). When selecting, satisfaction was higher in the tidy condition (M_{tidy}= 5.92 vs. M_{messy}= 5.31, p= .001). Thus, selecting from disorder, though more effective as a downsizing strategy, increased dissatisfaction.

DISCUSSION

Disorder facilitates downsizing, especially when consumers engage in a selection (versus rejection) strategy. Alternative-based (rather than attribute-based) processing and a reduced focus on the

positives explains how downsizing is facilitated. While more effective, this strategy reduces satisfaction and may explain why consumers (mistakenly) endorse the seemingly sensible strategy to reject items from an ordered environment.

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When Valuation Decreases with Duration of Ownership:
The Influence of Mere Duration-of-Ownership on Food Waste Behavior

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EXTENDED ABSTRACT

In a world replete with resource scarcity and poverty, it is surprising that significant amount of food is wasted on a regular basis. Some estimates reveal that almost one-third of the food produced for human consumption is either lost or wasted globally (FAO 2011). Yet, a typical four-person American household wastes almost $1,500 worth of usable food every year (Smith 2014). This wastage has other implications: it implies that the significant resources used in food production are also lost, and the resulting greenhouse gas emissions are also in vain. Thus, it is of paramount importance to identify factors that reduce food waste and thus help fight against hunger and aid in protecting the environment.

Given the enormity of this issue, reasons underlying food wastage have also been investigated. Extant research could be segmented into two broad streams: identifying product-level and consumer-level characteristics, respectively. From the product perspective, effects of packaging and date labeling on wastage behavior have been investigated (e.g., Cox and Downing 2007; Milne 2012; Williams et al. 2012). At the consumer level, focus has been on how excessive purchasing, over-preparation, and inappropriate storage contributes to wastage (Porpino, Parente, and Wansink 2015; see Porpino 2016 for a review). We examine how a specific consumer-related characteristic, "duration of ownership," affects food wastage.

Not all products are purchased and consumed in time—consumers often purchase food in advance for future use. Sometimes they store them longer than at other times. We propose that one factor that contributes to consumers' tendency to waste food is duration of ownership. Specifically, we propose a mere duration-of-ownership effect, which suggests that the length of ownership has a negative effect on evaluations, leading to more food wastage.

This mere duration-of-ownership effect occurs because food products with a longer duration of ownership are perceived as being less fresh compared to products purchased more recently. Interestingly, this negative effect of duration-of-ownership may persist even when manufacturing and expiration information are provided, and the actual freshness level is controlled for. These perceptions of freshness cohere with taste—such that food products that are perceived as being more (less) fresh, are believed to be more (less) tasty. These taste perceptions, in turn, affect waste behavior. Specifically, if the food is assessed as being more (less) tasty, then consumers are less (more) likely to waste it and waste less (more) of it. In summary, we hypothesize that food items that have been owned for a longer (vs. shorter) duration are perceived as being less fresh and less tasty, which leads to greater wastage—both in terms of likelihood of wasting as well as the amount of wastage.

We provide robust evidence for the mere duration-of-ownership effect in five experiments using a wide variety of food products. Experiments 1A and 1B provide preliminary evidence for the effect of mere duration-of-ownership on consumers' food waste behavior. Experiment 2A rules out an alternative explanation that participants may have inadvertently mistaken duration of ownership with the product's expiration date—longer duration of ownership implies the expiration date is closer. We do so by providing explicit information about the expiration date. In experiment 2B, we rule out another potential alternative explanation: if participants have owned the product longer, then the product may have been manufactured earlier. We explicitly informed all participants about the expiration date, but only half the participants were informed about the manufacturing date. Waste behavior was not influenced by whether or not the manufacturing date was provided or not. In experiment 3, we demonstrate external validity by replicating the mere duration-of-ownership effect in a context with real consumption behavior. We also provide support for our proposed serial mediation: longer (vs. shorter) duration of ownership → lower perceived freshness → lower anticipated taste → increased waste behavior.

We make the following notable contributions to theory and practice. Foremost, we contribute to a growing literature on food waste by demonstrating that a novel consumer-level characteristic, duration of ownership, can influence waste behavior. Our findings also have important public policy implications. A direct implication is that the mere duration-of-ownership effect can be used as a strategic tool to reduce food waste. Consumers should be reminded to only purchase appropriate amounts of food and consume them as early as possible. Additionally, when storing food in the refrigerator or in their pantry, it may be beneficial to store food in a manner that makes it more conducive to consume food owned for a longer duration first. Finally, educating consumers about these rather wasteful behaviors can also help reduce wastage.

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Circular Time Is Greener:
The Impact of Temporal Perspective on Pro-Environmental Behaviors

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EXTENDED ABSTRACT

People's perception of time is an important part of how they view the world (Cotte, Ratneshwar, and Mick 2004). Temporal perspective, an overall perception of how time goes by, can be classified into two general types: a linear perspective and a cyclical perspective (Graham 1981; Yamada and Yoshinobu, 2006). Our research question is how temporal perspective is related, if at all, to how people relate to the natural environment, and how it influences both attitudes and behavior in the environmental realm. We make contributions to the burgeoning research on spatial and temporal effects on thoughts and behaviors (Ruscher 2012). Importantly, we also examine a marketing lever that marketing managers can access to act on the results of our research.

We posit that people with a cyclical temporal perspective (vs. a linear perspective) are more likely to implement pro-environmental behaviors. People with a linear perspective believe that time is an ongoing process, which is unpredictable and lacking a regular pattern. We outline the relationship between how one thinks about time and how one thinks about space, and argue that consumers who think of time linearly also expect that spatial variation is also unstable, that is, the relationship between people and space is quite labile. Accordingly, people would regard themselves and space as two separate things. Applying this idea to the understanding of our relationship with the natural environment, these consumers believe the environment and humans are two separate things, a more anthropocentric belief (Tomasello 2009).

However, people with a cyclical perspective believe that time goes as repeated progress which has certain rules. Consumers who apply this view to the spatial process would expect that spatial variation is also stable, which means that there is a stable and ordered relationship between people and space. As a result, these consumers would treat themselves and the space as an interrelated unity. In this case, when considering one's relationship with the natural environment, these consumers include the environment in the self, seeing the natural environment and themselves as an organic whole, and they would try to maximize the benefits of the ecosystem, an ecocentric belief.

Prior researchers have shown that pro-environmental behavior has a significant positive correlation with an ecocentric belief (Schultz et al. 2005). We thus posit that consumers with a cyclical temporal perspective (vs. a linear perspective) are more likely to implement pro-environmental behavior. The inclusion of the environment in the self, and environmental beliefs, serially mediate the effect of temporal perspective on pro-environmental behavior.

We also propose two advertising appeals: a self-interested appeal and a biosphere-interested appeal. A self-interested appeal refers to the idea that environmental protection (EP) ads try to emphasize the benefit that environmental protection could provide for human beings. A biosphere-interested appeal refers to the idea that EP ads try to emphasize the benefit that environmental protection could provide for ecology and environment. We believe that whether the advertising appeals are matched with people's environmental belief could have an impact on their pro-environmental behavior regardless of their time perspective, but this relationship is influenced by temporal perspective.

Using secondary data from the Chinese General Social Survey, a national, comprehensive, and continuous academic investigation project, Study 1a and Study 1b demonstrate that individuals with a cyclical temporal perspective showed more pro-environmental behaviors. The data contain information about personal religious beliefs and environment-related behaviors. Prior literature suggests that Buddhist views are very closely attuned to cyclical notions of time (Corless 1989). Therefore, the Buddhism belief is a reasonable proxy of cyclical time perspective. We selected data from 2013 and 2015 to conduct our Study 1a and Study 1b, for they both contained the complete information about personal religious belief and environment-related behaviors. In Study 1a, we showed that people with a Buddhist belief did pro-environmental behaviors more frequently, while other religious beliefs had no effect on the frequency of pro-environmental behaviors. In Study 1b, we found that people with Buddhism belief used more CFLs in the house while other religion beliefs had no effect.

In Study 2, we provided a more direct test of the impact of time perspective on pro-environmental behavior. Participants were given a temporal prime depicting a tree, comprised a sequence of four color pictures of a tree, from a sprout to a fruit-bearing plant. In the linear condition, the photos were arranged horizontally from left to right, with a text describing the linear growth below the photos. The cyclical prime showed the same sequence, arranged in a circle with arrows between the photos. The text below described the cyclical growth. The results showed that compared to people in the linear condition, people in the cyclical condition provided more donations for an environmental protection project.

In Study 3, we replicated the result of Study 2 adopting another manipulation of temporal perspective. We also tested the serial mediation effect of inclusion of the environment in the self and environmental beliefs.

In Study 4, we tested the effect of advertising appeals on the relationship between temporal perspective and pro-environmental behavior. The results revealed that when the advertising appeals are matched with people's time perspective, both people with a linear perspective and people with a cyclical perspective were more likely to implement the pro-environmental behavior.

Through a series of studies, our research has shown that temporal perspective is a novel factor influencing pro-environmental behavior. Our research finds that temporal perspective influences people's understanding of their relationship with the environment, which in turn affects people's environmental beliefs and further pro-environmental behavior. When an advertising appeal advocating pro-environmental behavior is matched with people's environmental beliefs formed based on time perspective, this can enhance processing fluency, leading to more preference and related behavior.

We develop our theory of the effect of time perspective on pro-environmental behavior based on the spatiotemporal connection but the environment is only one aspect of the concept of space. Future studies could explore whether there is any other space-related variable that would be influenced by temporal perspective, as well as other marketing levers to further develop the theory.

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The Role of Mere Social Presence on Innovation Adoption

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EXTENDED ABSTRACT

While preference and adoption of innovative products offers an opportunity for consumers to stand out, these innovations may also be associated with social risk. The current research highlights how these related and often conflicting factors can, depending on the social context, impact innovation adoption. We suggest that because innovative products offer an opportunity for consumers to stand out, the mere presence of others will enhance their willingness to not only buy but also fund such products. However, we argue that innovative products that make one stand out also carry an inherent social risk. The preference or adoption of such products can be judged to be 'bizarre' or 'ridiculous' and may lead to social rejection or disapproval. For example, using wearable technology to control one's refrigerator or laundry settings may make a person appear either lazy or extravagant. We suggest that such perceived social risk will become prominent and outweigh the benefits of standing out and being perceived as unique, when the mere social presence is of familiar others. We expect this effect to occur because in social groups with meaningful social relationships, people have a heightened sensitivity to approval or judgment and conformity is usually emphasized (Mandel 2003). Such increase in perceived social risk, that is induced because of the presence of familiar others, we propose will attenuate the positive effect of mere social presence on preference and adoption of innovative products. We test our hypothesis in a set of three studies.

Study 1 examined the main effect of mere social presence on innovation adoption. Participants were assigned to one of three conditions: no social presence, unfamiliar social presence, or familiar social presence. The familiarity of mere social presence was manipulated through a communication task adopted from Small and Simonsohn (2008), while those in the no social presence condition completed the study alone in a private room. The focal task measured participants' willingness to fund innovative business ideas. Mere social presence had a significant effect on willingness to fund innovative business ideas ($F(2, 217) = 3.49$, $p = .032$). Those surrounded by the mere presence of unfamiliar others ($M = 4.68$, $SD = .96$) were more willing to fund innovative business ideas than either those in the no presence condition ($M = 4.33$, $SD = 1.04$, $t(217) = 2.19$, $p = .029$) or those in the familiar others condition ($M = 4.30$, $SD = .90$, $t(217) = 2.35$, $p = .020$). However, there was no significant difference between the no social presence and the familiar social presence conditions ($t < 1$).

In Study 2, participants were randomly assigned to one of the two social presence conditions (unfamiliar vs. familiar others). Depending on the condition, they were asked to imagine a shopping scenario where there were quite a few other shoppers around, or quite a few people from their work place were around. Then they completed a product choice task in which they were asked to choose either the traditional product or the innovative version of the product (Mehta et al. 2012). Next, we measured perceived social risk and motivation to stand out to examine the underlying process. A one-way ANOVA showed that those in the unfamiliar condition ($M = 3.92$, $SD = .93$) indicated a higher likelihood of adopting innovative products than those in the familiar condition ($M = 3.57$, $SD = 1.09$, $F(1, 158) = 4.58$, $p = .034$). In addition, perceived social risk was lower under the unfamiliar condition ($M = 2.46$, $SD = 1.14$) than the familiar condition ($M = 2.85$, $SD = 1.30$; $F(1, 158) = 4.08$, $p = .045$), while the motivation to stand out was higher under unfamiliar condition ($M = 3.55$, $SD = 1.46$) than under familiar condition ($M = 3.06$, $SD = 1.45$; $F(1, 158) = 4.50$, $p = .035$). Mediation analysis shows that perceived social risk and motivation to stand out serially mediated the relationship between mere social presence and innovation adoption ($\beta = .04$, $SE = .024$, bias-corrected 95% CI = [.004, .105]).

Study 3 utilized a 2 (mere social presence: unfamiliar others vs. familiar others) x 2 (perceived social risk: mitigated vs. control) between-subject design. Mere social presence was manipulated as in Study 1. Next, we manipulated the perceived social risk and induced lower perceived social risk by suggesting that innovativeness was an accepted social norm within participants' social circles (Mehta et al. 2017). Participants in the control condition received no such instructions. After social risk manipulation, all participants were presented with a product choice task similar to that used in Study 2. A two-way ANOVA revealed a significant interaction ($F(1, 192) = 5.25$, $p = .023$). In the control social risk condition, those in the unfamiliar condition ($M = 3.75$, $SD = 1.02$) indicated higher innovation adoption tendency than those in the familiar condition ($M = 3.34$, $SD = .68$; $t(192) = 2.32$, $p = .021$). However, when the perceived social risk was mitigated, the adoption of innovation was high regardless of the type of mere social presence ($M_{\text{unfamiliarpresence}} = 3.61$, $SD = .76$ vs. $M_{\text{familiarpresence}} = 3.78$, $SD = .98$; $t < 1$).

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Brightness Increases More Positive Views of Humanity and Prosocial Behavior of People Low in Moral Identity

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EXTENDED ABSTRACT

People exhibit fewer dishonest or unethical behaviors in a brighter condition (e.g., Hirsh, Galinsky, and Zhong, 2011; Zhong, Bohns, and Gino, 2010). However, it is not known whether a brighter condition motivates more helping, charitable behaviors, or prosocial consumption. Prosocial behavior is the joint product of contextual factors and individual differences (e.g., Walker and Frimer, 2007; Lee, Winterich, and Ross, 2014). We propose that brightness increases the prosocial behaviors, but only among individuals low in moral identity, and this effect is mediated by positive views of humanity.

Prior research shows that people associate brightness with good and darkness with bad (Banerjee, et al., 2012). For example, people are less likely to cheat than in a dark room than those in a bright room (Zhong et al., 2010). When there is sufficient sunlight reaching on the earth, people are more willing to fill out a survey or give tips (Cunningham, 1979). We propose the importance of moral identity in more thorough understanding of the effects of bright (vs. dim) environment on people's prosocial behavior. Moral Identity is defined as the "moral traits are central to one's self-concept" (Aquino and Reed, 2002, p. 1427). People high in moral identity are more likely to volunteer or donate as a result of self-consistency motive (e.g., White and Peloza, 2009), and their prosocial behavior is less susceptible to external factors (Rholes and Bailey, 1983). In contrast, people low in moral identity are more likely to be prosocial when certain situational factors are made salient (Aquino et al., 2009). Therefore, we hypothesize that:

Hypothesis 1   Moral identity and lighting conditions jointly predict prosocial behavior such that people low in moral identity are more likely to engage in prosocial behaviors in the brighter (vs. dimmer) conditions, while those high in moral identity engage in prosocial behaviors regardless of the lighting conditions.

People's beliefs about whether human beings are inherently good or evil influence their basic view of humanity (Kaltenthaler and Miller, 2012). According to *social projection* in social psychology, people high (vs. low) in moral identity tend to believe that others are also like them, making them have positive (vs. negative) attitudes toward human beings.

We argue that brightness increases the positive views of humanity for individuals who are low in moral identity. Brightness is associated with hopefulness (Dong et al., 2015), and hopefulness increases the expectation of positive outcomes for the future (Winterich and Haws, 2011). This elevating emotion causes individuals low in moral identity to have "more positive views of humanity" and "more desire to be a better person" (Aquino et al., 2011, p. 709). In contrast, people high in moral identity already have high positive views of humanity (Aquino et al., 2011). People with a positive view of humanity are more likely to help (e.g., Dirks, 2000).

Therefore, we propose that:

Hypothesis 2   Moral identity and lighting conditions jointly predict prosocial behavior via views of humanity. Specifically, people low in moral identity behave more prosocially in brighter (vs. dimmer) conditions mediated by more (vs. less) positive views of humanity, whereas those high in moral identity have consistent prosocial behaviors and positive views of humanity regardless of the lighting condition.

Study 1

To test H1, 213 university students participated in a 2 (dark vs. bright) by 2 (measured moral identity: high vs. low) between subject design study. Participants were asked whether they would like to remind their colleague of the undone pants zipper at a lounge, in which the lighting is either darker or brighter. Results showed that individuals with moral identity lower than 2.8 (min =1, max = 7) were more likely to help in a brighter than a darker room, whereas individuals with moral identity higher than 2.8, lighting had no effect on their helping intention.

Study 2

Two hundred and ninety-four university students were recruited to do an experiment in a brighter or darker room. All participants were asked about their donation intention if they had a chance to win a lottery $20. People whose moral identity is lower than 4.87 (min = 1, max = 5) donate more in the brightness condition than in the darkness condition (β = -3.972, t = -3.431, $p < .001$).

Study 3

To test H2, we examined the causal chain via two studies. In study 3A, 125 university students were recruited to do an experiment in a room with bright or natural lighting. Results show a significant interaction between lighting and moral identity on views of humanity (β = -.927, t = -2.769, $p < .01$). Participants who were not primed moral identity had more positive views of humanity in a brighter environment (M_{bright} = 5.31, $M_{natural}$ = 4.65, $F_{(1, 51)}$ = 8.601, $p < .01$), while those who were primed moral identity had no difference.

In study 3B, 133 university students read a short passage either about the values of philosophers who held a positive view of human nature, or about a forest (control group). The result showed that a positive view of humanity leads to more generous donations ($M_{positive}$ = 56.67, $M_{control}$ = 39.00, $F_{(1, 130)}$ = 8.179, $p < .01$).

Study 4

We examined the lighting effect on consumers' purchase intention of fair-trade coffee. Two hundred and twenty-eight university students were shown a coffee store that provided fair-trade coffee with either brighter or natural lighting. Manipulation check showed that participants perceived fair-trade coffee is to help coffee growers (M = 6.21, $t_{(4)}$ = 28.80, $p < .000$). People with moral identity lower than 4.66 (min = 1, max = 5) had more purchase intention of fair-trade coffee in a brighter store, while those with moral identity higher than 4.66 had no difference.

This research extends the literature about the joint effect of contextual factors and individual difference on one's prosocial behaviors (Aquino et al., 2009) by examining the interaction effect of brightness and moral identity on consumers' prosocial decision making. Also, the finding that positive view of humanity is the underlying mechanism of prosocial behaviors for people low in moral identity is conceptually novel and empirically important. Empirically, our research provides charities, non-profit organizations, prosocial products retailers, and governments with an effective and economical way—turning up the lights—to motivate more consumers to help, donate, or buy prosocial products.

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I Desire a Brand When I See the Standard: How to Communicate Brand Rejection

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EXTEDED ABSTRACT

Literature shows that when a brand that expresses consumers' self-concepts, blatant rejection (BR) leads to consumers' decreased brand wants (e.g., Hu et al., 2018; Ward and Dahl 2014). In this paper, we explore an alternative communication strategy of brand rejection - exclusive standard setting (ESS), and find out that consumers who encounter ESS increase their brand desire when 1) they perceive the rejecting brand is still attainable, and 2) the brand is self-expressive, and the underlying mechanism is their increased brand aspiration.

In our framework, Blatant Rejection means that a brand blatantly indicates to motivated but de-selected consumers that they are not the target consumers. Prior work shows that blatant threat causes the targets to react defensively (e.g., Wan, et al., 2013), and to avoid the threat source (e.g., Seibe and Forster, 2004). Once one's defensive mechanism is activated, it overwhelms other possibilities that a consumer pursues a brand because of an unconscious defense mechanism (e.g., Cramer, 2001).

Whereas, in our framework, exclusive standard setting means a brand shows motivated but de-selected consumers that they are different from its target consumers who have met exclusive standards. Prior work shows people are motivated to improve themselves to be closer to the comparison target, only if the improvement is seen as attainable (Dyczewski and Markman, 2012). Therefore, we hypothesize that

> **Hypothesis 1** *After encountering ESS (vs. BR), consumers will increase (vs. decrease) their brand desire if they perceive the brand is attainable. If the brand is perceived to be less attainable, the positive effect of ESS will be mitigated.*

We also propose that brand aspiration mediates the brand rejection and brand desire. Brand aspiration includes identity signaling, social recognition, self-esteem, and achievement signaling (Sreejesh, Sarkar, and Roy, 2016). In the ESS message, only those who meet the exclusive standard have the prestige to be the target consumers, making consumers aspire to pursue the brand to signal their identity as one privilege target consumer. Especially, when a brand is perceived to be attainable, the attainability of a goal creates hopes and possibilities (Weiner, 1979). In this case, consumers would feel more motivated to achieve the goal of becoming a brand member as a result of brand aspiration. In contrast, a challenging but unachievable goal decreases one's intrinsic motivation (e.g., Gómez-Miñambres, 2012). In this case, when the brand is not attainable, consumers will be less aspired and thus have less desire to be a brand member. Therefore, we hypothesize that

> **Hypothesis 2** *After encountering ESS (vs. BR), consumers will increase (vs. decrease) their brand desire if they perceive the brand is attainable, mediated by their increased (vs. decrease) brand aspiration.*

Consumers sometimes choose brands only for functional benefits (Park, Jaworski and MacInnis, 1986). If self-concept is not involved, BR will not make consumers feel negative (Johnson et al., 2012). Also, when the consumers feel the exclusive standard is irrelevant to themselves, they are not motivated to reduce the distance between the target consumers and themselves. Therefore, we propose that

> **Hypothesis 3** *After encountering ESS (vs. BR) from a self-expressive brand, consumers will increase (vs. decrease) their brand desire if they perceive the brand is attainable, mediated by their increased (vs. decrease) brand aspiration. The moderated mediation effect will be mitigated for a non-self-expressive brand.*

Study 1

Two hundred and ninety-seven university students were recruited in a 3 (BR vs. ESS vs. control) between subject design study with measured perceived attainability. All participants were introduced to a restaurant & hotel brand which is self-expressive for university students (pretest). After completing a survey, participants were randomly provided with *BR (i.e.,* they were told directly that they are not a target consumer), *ESS (i.e., they* were shown information about four target consumers), or *neutral information*. Results showed that both BR and ESS make participants feel rejected (M_{BR} = 3.95, $M_{control}$ = 2.37, F (1, 196) = 105.21, p < .000; M_{ESS} = 3.19, $M_{control}$ = 2.37, F (1, 198) = 21.45, p < .000), but when participants perceive the attainability of the rejecting brand is larger than 3.05 (Min = 1, Max = 5), participants who encountered ESS (vs. BR) had more (vs. less) brand desire.

Study 2

Two hundred and eighty-four American participants were recruited from Mturk for a 3 (BR vs. ESS vs. Control) by 2 (Perceived attainability: high vs. low) between-subject design study. Participants were told that Parliament Pub is a political-themed pub for their Party, and were asked about their volunteer (more attainable) or work experience (less attainable) with this Party. After that, participants got feedback: BR, ESS, or control. Results indicated that ESS (vs. control) interacted with perceived attainability had effect on consumers' brand desire (β = .923, t = 2.610, p < .01). Whereas, BR (vs. control) caused less brand desire (M_{BR} = 3.54, $M_{control}$ = 4.34, F (1, 188) = 15.133, p < .05), and perceived attainability had no moderation effect.

Study 3

Study 3 replicated Study 2 except that the control condition was dropped and another variable, i.e., brand aspiration, was measured. Results replicated those of study 2, and the mediation through brand aspiration was significant (β = -1.102, SE = .246; 95% CI = -1.613 to -.648) (Process Model 8, Hayes, 2013).

Study 4

Five hundred and fifty four female participants were recruited from Mturk for a 3 (BR vs. ESS vs. Control) between-subject study design with measured self-expressiveness and perceived attainability. Participants were rejected by a fashion brand that only had size 0 and 2.

The three-way interaction among ESS (vs. control), self-expressiveness, and perceived attainability was significant on brand desire

(β = .109, t = 2.537, p < .05) and brand aspiration (β = .133, t = 3.143, p < .005). Only when the brand was more self-expressive (M+1SD), the moderated mediation effect is significant -- β = -.365, SE = .183, 95% CI = -.7228 to -.0020, if the brand was perceived as less attainable; β =.461, SE = .142; 95% CI = .1934 to .7457, if the brand was perceived as more attainable (Hayes, 2013, model 12).

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To Do or to Have?
Exploring the Effects of Social Exclusion on Experiential and Material Purchases

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EXTENDED ABSTRACT

As one of the most common social phenomena, social exclusion exists widely in all our modern life (Nezlek et al., 2015; Rudert & Greifeneder, 2016). With the development of Internet and social media, social exclusion has become more common and targeted (Katharina et al., 2018). Being deprived of social acceptance can have significant impact on one's psychological and physiological well-being (Baumeister et al., 2005; Williams & Nida, 2011). As consumption is an important approach and tool to achieve the goal of social acceptance and belonging (Mead et al., 2011), social exclusion inevitably has a certain impact on consumers' judgments and choice of products and brands.

Different types of purchases affect the degree of people's interconnection due to their different nature and manifestations (Boven & Gilovich, 2003; Howell et al., 2012). For example, traveling, dining, outdoor activities, etc. are usually with others, more of them are a common participation and experience(Bastos & Brucks, 2017). While the purchase of material goods such as clothes, tableware and computers is more generally personal behavior, relatively isolated. Despite the large body of research that examines the behavioral consequences of social exclusion in the interpersonal domain, and the recent work in the consumption domain, it remains unclear how social exclusion might systematically influence consumers' more general types of purchase. The current research attempts to address this issue.

Specifically, we examined how the experience of social exclusion influences consumer preference for different types of purchase. We classify the types of purchase into experiential purchases and material purchases (Boven & Gilovich, 2003). Experiential purchase refers to the purchase behaviors generated for gaining life experience or experience, such as traveling etc. In contrast, material purchases refer to the consumption behaviors for the purpose of owning commodities, such as clothing, etc.(Boven & Gilovich, 2003). Compared with material purchases, experiential purchases are often more social and can connect us with others more broadly and deeply (Caprariello & Reis, 2013), experiential purchase is easier and more effective than material purchase in enhancing social relations (Gilovich et al., 2015). Therefore, in order to meet the needs of relationship satisfaction and sense of belonging, we speculate that individuals who suffer from social exclusion will prefer more experiential purchases than material purchase.

DATA ANALYSIS & RESULTS

Experiment 1 was designed to find out whether individuals would prefer experiential purchases after social exclusion (H1). With the popularity of social networking sites, social exclusion may occur more frequently in cyberspace (Williams et al., 2000), so this part of the study of social exclusion manipulation refers to the Wan et. al. (2014) task of social exclusion in online social networking environment. The results showed that the preference level of experiential purchase (M = 5.48, SD = 1.71) was significantly higher than that of social inclusion group (M = 3.63, SD = 1.53), F(1, 87) = 28.84, p < 0.001. confirmed H1, social exclusion can lead to people's preference for experience purchases.

In order to better test the robust of the H1 and the mediating effect of threatening relational needs, we conducted experiment 2.

We have made some improvements on the experimental 2 process: first, we describe the same product as different types of purchases to strictly test the results of the study; second, we use different methods to manipulate social exclusion to enhance the stability of the study. The results showed that the preference level of experiential cup (M = 5.45, SD = 1.90) in social exclusion group was significantly higher than that in social inclusion group (M = 4.08, SD = 1.54), F(1, 116) =17.581, p < 0.001, which confirmed that social exclusion would lead to people's preference for experiential cup. And threatening relational needs plays a part of mediating role in the influence of social exclusion on the choice of different purchase types.

Experiments 3 were designed to repeat experiments 1 and 2 to find out whether individuals would prefer experiential purchases after social exclusion, and to examine the moderating effect of self-construal so as to enhance the stability of the results and clarify their marginal conditions. The result show that social exclusion significantly increased the individual's purchase preference for experiential products for dependent self-construals(Mexclusion = 6.87, Minclusion = 4.56, F(1,126) = 17.95, p < 0.001), but had no significant effect on independent self-construals(Mexclusion = 4.86, Minclusion = 4.09, F(1,126) = 1.85, p = 0.176).

CONCLUSION

The current research contributes to a number of different literatures. First, this work provides the first systematic investigation of consumers' preference for experiential purchases as a function of their motivation to seek relational needs satisfaction directly with a specific type of purchase, which is of positive theoretical significance. Moreover, the present research also adds to a growing body of compensatory consumption research which demonstrates that social motivations guide consumption decisions (Mandel et al., 2016). Finaly, the current research expands the understanding of different types of purchase, and explores how the differences in additional conditions of experiential purchase affect consumers' behavior decisions, an area still in its infancy.

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The Slow and the Spurious:
The Effect of Video Slow Motion on Consumer Persuasion and Trust

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EXTENDED ABSTRACT

Video advertisements have arguably become the dominant form of advertising; television aside, one billion YouTube users watch 500 million hours of ad-filled videos every day (Biteable 2019), while mobile video ad spend accounts for over 70% of digital ad spend. As a sensory medium, video ads are more engaging, memorable, and popular than other forms of content (Bowman 2017). Despite their versatility, video advertisements are also fundamentally limited to visual (and audio) information; this makes it difficult for consumers to discern the quality or performance of products that are predominantly defined by non-visual attributes (e.g., taste of food/beverage, feelings of using facial-cleanser, sense of motion from riding a bicycle). Consequently, marketers often employ actors to simulate consumption and express social cues that serve as social proof for a product's utility (Cialdini 2007). In such contexts, consumers infer the quality of a product from the actor's behavior (e.g., person slurping noodles with relish, savoring the sweetness of a chocolate bar, smiling contently while commuting on a bicycle). A commonly used and technically easy means to provide social signaling is to slow down a video's frame-rate; in other words, portray consumption in slow-motion. For example, in many instant noodle commercials, actors seem to slow down the act of consumption, with eyes half-closed and head slightly rolling, to signal enjoyment and convince customers just how overwhelmingly tasty the bowl of ramen is; similarly, many chocolate commercials even slow down the act of pre-consumption as actors (often female) move the object of sensual delight towards their mouths in slow motion, almost teasingly, before a time warp of dreamy mastication and drawn-out euphoric expressions ensue. In these and other related cases, slow motion denotes intentional savoring, while the distorted sense of time represents elevated enjoyment and the experience of the sublime.

Although slow motion consumption in ads may provide clear signaling, are they necessarily more persuasive? Literature from other fields suggests that human actions viewed in slow motion can sometimes create unfavorable perceptions. Slow motion replays of fouls committed in professional soccer are perceived by referees as more "willful, deliberate, and premeditated" compared to live-speed footage (Spitz et al. 2018); similarly, simulated juries viewing actual surveillance footage of violent crimes will perceive the crime as more intentional when the video is played at a relatively slower frame rate (Caruso, Burns, and Converse 2016). Overall, slower motion (vs. natural speed) is associated with pre-meditated intentions.

Since there are often perceptible differences between typical consumption speed in daily life versus the prolonged consumption in a slow motion ad, one might expect similar meta-inferences to arise. Indeed, slow motion film sequences are commonly satirized in comedy and a cultural byword for exaggeration. We thus hypothesize that slowing an advertising video can lead consumers to perceive that the action and emotion of an actor's behavior as pre-formulated and intentional. In line with the persuasion knowledge model (Campbell and Kirmani 2000; Friestad and Wright 1994), which postulates that consumers tend to construct knowledge about persuasion and use this knowledge to "cope" with persuasion episodes, we predict that the overt persuasion signal associated with the slowed behavior in the commercial would, contrary to the intended effect, make the advertised products less attractive. Moreover, literature in cognitive psychology shows that individuals vary in the ability to represent and interpret the mental states and intention of others (i.e., the ability of theory-of-mind; Gallagher and Frith 2003), we thus also predict that individuals' theory-of-mind ability moderates the effect of slow motion on consumer persuasion.

Study 1, which involved the incentive-compatible choice of an energy drink, examined whether the effect of presentation speed affected actual consumer choice. Results show that applying slow motion (vs. natural speed) in a video advertisement lead to a lower propensity to choose the promoted product ($M_{natural\ speed}$ = 72.4%, $M_{slow\ motion}$ = 52.6%; b = - .86, z = - 2.49, p = .013).

Study 2 replicated the effect for three other product categories and video advertisements; we found that slow motion decreased both perceived quality of the products ($M_{natural\ speed}$ = 7.54, $M_{slow\ motion}$ = 6.92; b = - .63, t = - 4.63, p < .001) and interest ($M_{natural\ speed}$ = 5.36, $M_{slow\ motion}$ = 4.75; b = - .61, t = - 2.47, p = .014), but did not affect ease of visual processing or engagement level while viewing the video (p's > .1). The effect thus seems robust across several marketing and video contexts.

Study 3 explored whether individuals' theory-of-mind ability is a moderator and investigated the mediating role of perceived persuasion intention. We found that the effect of slow motion was mitigated among individual with low theory-of-mind (p > .1, based on Johnson–Neyman point). Moreover, moderated mediation analysis shows that the indirect effects through perceived persuasion intention were significant among high theory-of-mind participants (95% CI: [- .32, - .06]) but less pronounced among low theory-of-mind individuals (95% CI: [- .01, .13]).

In Study 4, we examined whether visual focus moderated the effect. We replicated the basic effect in the 'no instruction' conditions (which was similar to Study 1 and 2), and again found that slow motion worsens attitudes toward promoted products (p's < .05). However, when participants were instructed to visually focus on the physical product (and not person) while viewing the advertising video clip, slow motion began to yield benefits and increased attitudes for the advertised products (p's < .05). In addition, consistent with our proposed mechanism, the perceived persuasion intention significantly mediated the backfired effect of slow-motion in the control condition (95% CI: [- .28, - .02]) but not in the product-focus condition (95% CI: [- .09, .20]).

This research provides a starting point to consider how subtle visual cues from actors' behavior in commercials trigger consumers' perceptions of persuasion intention and consequently affect attitudes toward advertised products. Our findings have direct managerial implications for video marketing, particularly for TV and mobile advertising, in which social-proof and slow motion are often used as persuasion strategies.

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More Than One Way to Break an Egg: How Creativity Leads to More Enjoyment of Repeated Consumption Activities

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EXTENDED ABSTRACT

Although the topic of consumer creativity has garnered a great deal of attention from researchers since the 1980s (e.g., Hirschman, 2002), extant creativity research has primarily focused on examining the impact of creativity on consumer choices in one-shot decision settings. For example, Gino and Ariely (2012) show that creativity makes people less moral and engage in more unethical behaviors. Yang et al. (2011) suggest that a creative mindset makes people prefer advertising messages inconsistent with their common way of thinking. In contrast to prior research, we investigate the effect of a creative mindset on consumer behavior in repeated consumption contexts.

Consumers often have to repeat the same experiences in their mundane lives. Literature on hedonic adaptation suggests that consumers' enjoyment decreases as they repeat the same experience or consumption (e.g., Rolls et al. 1981)subjects (n=32. Rather than the intuitive prediction that creativity leads to less enjoyment of repeated consumption activities, we hypothesize that a creative (vs. non-creative) mindset—both dispositionally-oriented and situationally-primed—makes consumers enjoy the repeated consumption experiences more.

Variety seeking has been found to be effective in increasing consumption enjoyment. For example, consuming a variety of food items improves consumers' consumption experiences (e.g., Redden 2008)as people ate more jelly beans, their enjoyment declined less quickly when the candy was categorized specifically (e.g., cherry, orange, and merely anticipating future variety can significantly reduce present satiation rate (Sevilla, Zhang, and Kahn 2016). Rather than *alternative variety* (i.e., resorting to different alternatives) as studied in prior research, we argue that enjoyment can also be sustained with *approach variety* (i.e., taking different approaches to consuming the same item). Preliminary support can be drawn from research showing that creativity facilitates flexibility in moral judgment (Gino and Ariely 2012) and product usage (Mehta and Zhu 2016)makes consumers think beyond the traditional functionality of a given product. A central premise of our theory is that creativity promotes flexibility in how consumers approach the same consumption experience. Because creative consumers are able to generate more variety in their approaches to completing the same experience (approach variety), they virtually create "new" experiences when repeating seemingly identical experiences. Therefore, they enjoy the repeated experiences more than non-creative consumers.

Our pilot study examined how a creative personality affects consumer enjoyment in repeated experiences with a writing assignment. After working on a writing task twice, participants reported their enjoyment (e.g., how much did you enjoy writing the second poem) and willingness to work on the same writing task again. Finally, participants completed Gough's (1979) Creative Personality Scale. The results showed that both enjoyment and intention to repeat the task were positively correlated with the creative personality ($ps < .05$).

Study 1A manipulated the creative mindset with a scrambled-sentence task (Gino and Ariely 2012). Participants wrote a short story with a few given words twice and reported their intent to conduct the same task again after each time they completed the task. Results showed that participants' intention to conduct the task again did not differ significantly between the creativity and control conditions after the first time. However, after the second time, participants in the creativity condition reported greater intention to conduct the task again than those in the control condition ($p < .05$). Study 1B replicated the effects by asking students to introduce their campus twice to prospective students.

Study 2 further examined the underlying process by measuring approach variety. Participants introduced their favorite product twice to their friends and reported their intent to introduce the product again after each time they completed the product introduction. Results showed no significant difference in their intention to introduce the product again after the first introduction. However, creativity led to greater intention after the second introduction. Approach variety mediated the effect of creativity on participants' intention to introduce the product again after the second introduction. Study 3 confirmed the underlying mechanism by manipulating approach variety directly. Specifically, the impact of creativity on sustaining enjoyment was attenuated when all participants were prompted to write the introduction differently from the one they had written previously.

Study 4 tested the durability of the "enjoyment-sustaining" effect of creativity. Participants were randomly assigned to a 2 (prime: creativity vs. control) × 3 (consumption time: 1-day vs. 3-days vs. 5-days) between-subjects design. Participants first completed an experience recall task that manipulated the creative (vs. control) mindset. Next, they completed an unrelated breakfast plan task. Participants imagined preparing eggs for breakfast and wrote down how they would cook the eggs for breakfast for one day, three consecutive days or five consecutive days. After that, they reported their intention to have eggs for another breakfast. Results yielded a significant interaction effect ($p < .001$). In the 1-day condition, participants in the creativity and control conditions did not differ significantly. In the 3-day condition, creativity led to greater intention to consume eggs again ($p < .05$). However, creativity backfired in the 5-day condition ($p < .001$).

To sum up, our research expands the existing research which emphasizes that consumers can sustain enjoyment by turning to different alternatives. We propose and find that enjoyment can also be sustained by turning to different approaches towards repeated consumptions. Our work connects research on creativity, enjoyment, and repeated consumption.

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Just "Remember": The Right Reminder that Leads to Actions

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EXTENDED ABSTRACT

Marketers routinely send out reminders to consumers about information they need to pay attention to, products or services they should use, and actions they ought to take. For example, a clothing brand reminds its customers to check out its latest styles. A credit card company reminds its customers to pay their bills on time to avoid late fees. In this research, we compare two semantically equivalent expressions, namely "*remember to do something*" and "*don't forget to do something*," that are commonly used and often treated as interchangeable in reminders, and propose that "remember" as compared to "don't forget" is more effective in activating an action orientation in consumers and increasing their likelihood to take action. Recent research has started to examine factors that can prompt consumers to take action. For example, Jiang, Zhan, and Rucker (2014) find that power as a psychological catalyst promotes action orientation. Coleman et al. (2017) identify fear as a type of emotion that facilitates action. We join this stream of research to investigate how a subtle difference in the linguistic framing of reminders can lead to action.

Our hypothesis that "remember" is more conducive to action than "don't forget" is based on the argument that, although these two phrases are semantically equivalent, the latter contains a negation ("don't") connotating denial, contradiction, or disapproval. Verbs, on the other hand, connote action. Neuroscience research suggests that consumers' processing of verbs produces a pattern of brain activation similar to when consumers perform actions (e.g., Damasio 1993) the patients known as AN-1033 and Boswell consistently produced the correct target words, performing no differently from normal controls. However, in a similar task designed to elicit the production of nouns, both patients performed quite defectively, and their scores were many SDs below those of controls. Language processing was otherwise normal--i.e., there were no impairments in grammar, morphology, phonetic implementation, or prosody; reading and writing were normal. In a third patient (KJ-1360. Research also shows that priming individuals with verbs instigates a general action goal (e.g., Albarracín et al. 2008). Thus, we suggest that while "remember to do something" gears attention toward the action that follows the verb, this facilitation effect is muted by the embedded negation (i.e., "don't"). Because "remember" (vs. "don't forget") makes consumers more likely to think about the necessary steps to achieve the reminded action, we further propose that the effects of "remember" (vs. "don't forget") reminders on consumers' action orientation and likelihood to act are mediated by a temporarily activated approach tendency.

Study 1 manipulated reminders embedded in a to-do list. Students read the importance of making to-do lists and composed a five-item to-do list starting with "remember to do__" or "don't forget to do__". Afterward, participants indicated their overall action orientation (adapted from Jiang et al., 2014). We also assessed participants' approach and avoidance tendencies (measures adapted from Watkins et al. 2006). Results showed that participants in the "remember" (vs. "don't forget") condition reported a greater action orientation (p <.05). A similar pattern was found for approach tendency (p <.05). Mediation analysis further showed that the approach tendency mediated the effects of reminders on action orientation.

Study 2 replicated the findings by reminding consumers about getting flu shots and donating to Harvey victims with messages framed as either "remember to __" or "don't forget to __". After each reminder, participants reported their action orientation and indicated their likelihood to carry out the action before a given time (1= very unlikely; 9 = very likely). Results showed that the "remember" (vs. "don't forget") reminder led to a greater action orientation for both events (ps <.05). Similar results were found for behavioral likelihood. Mediation analysis showed that action orientation mediated the effects of reminders on participants' likelihood of getting the flu shots and donating to Harvey victims by the end of October.

Study 3 tested the robustness of the effects by reminding consumers about donating Christmas meals. The procedure was similar to Study 2. Results showed that the "remember" (vs. "don't forget") reminder led to a greater action orientation, behavioral likelihood, and approach tendency (ps <.05). Further analysis confirmed a serial mediation: remember→approach tendency→action orientation→behavioral likelihood.

Study 4 examined boundary conditions for the proposed effect with a more consequential measure of action orientation. The study featured a 2 (reminder: remember vs. don't forget) × 3 (temporal distance: control vs. near vs. far) between-subjects design. Participants were reminded about preparing Valentines' gifts for their loved ones. In the near (far) distance condition, we added "You *only (still)* have two weeks…" to the reminder. Participants then indicated exactly on which day of February they would start preparing their Valentine's gifts on a 10-point sliding scale (Feb 5 to 14). Results yielded a significant interaction effect ($p < .01$). In the control condition, "remember" led to a greater action orientation. In the far-distance condition, there was no significant difference between the two reminders. However, in the near-distance condition, "don't forget" led to a greater action orientation.

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How Chatbot Service Agents Can Alleviate the Negative Effect of Unresolved Requests on Consumers' Trust Toward Companies

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EXTENDED ABSTRACT

Driven by the development of artificial intelligence, the ability of chatbots to provide effective responses is growing. This leads to a question: when chatbots handle customer requests just like human agents do, will consumers have a different perception and respond differently merely because the service is delivered by a chatbot instead of a human? To address this question, we investigate how chatbot (vs. human) service agents influence consumers' trust and future reuse intention toward a service when its robot (vs. human) service agent fails (vs. succeeds) to meet their service request.

A study conducted by Malle et al. (2015) suggests that people expect robot agents act in a more objective and rational way than human agents. We believe it is because people are aware of the nature of robot agents, that is, robot agents are not real humans with their own will and desires, but artificial agents preprogrammed to follow given rules. Hence, when there is a potential conflict of interest, compared with human agents, the perception is that robot agents should respond more neutrally and objectively. Accordingly, consumers may also feel robot service agents are less reluctant to solve service problems than human agents, and failed service requests from robot agents should also be less likely to be deemed the outcome of an unwillingness to help. As the perceived intention to serve consumers' best interest is a key factor of trust (Benbasat and Wang 2005; Choi and La 2013; Lee and Choi 2017), we, therefore, propose that an unresolved service request will be 1) less likely to reduce consumers' trust in a company and 2) less likely to reduce their reuse intention toward the service provided by the company when the service request is handled by a chatbot rather than a human. We further propose the perceived willingness to solve the problem will mediate the above effects. Two studies were conducted to investigate these hypotheses.

Study 1 had a 2 (request handling status: failure vs. success) × 2 (service agent: chatbot vs. human) between-subjects design. Participants (115, M_{age} = 23.5, 78 female) were invited to the lab and were asked to imagine being a proprietor who found out that their business' water supply was cut off. Thus, they needed to solve the problem by reporting this issue to the property management company via a service agent in its app. They were either informed that the service agent was a chatbot or human service agent. However, the actual conversation they had with the service agent was conducted by trained research assistants whose responses were consistent across the chatbot and human conditions. To manipulate the service handling status, the conversational agents in the success condition responded positively to the request to send a plumber to solve the problem. In the failed condition, the service agent informed participants that the service request could not be satisfied because the plumbers were not at work. The perceived willingness of the service agent to solve the problem (three items, α = .81, Dabholkar et al. 1996) and trust in the company (nine items; α = .96, Lee and Choi 2017) were measured on 7-point Likert scales. The results revealed that when the service request was unsolved, participants' trust in the company was higher when they interacted with a chatbot than a human agent ($M_{chatbot}$ = 5.22, M_{human} = 4.95; p =.05) due to a higher level of perceived willingness of chatbot (vs. human) in solving the problem ($M_{chatbot}$ = 4.19, M_{human} = 3.34; p = .009). Notably, the indirect effect was significant when the service request was unsolved (95% CI between .03 to 1.17). When the service request was successfully resolved, the indirect effect of

the type of service agent on trust in the company through perceived willingness to solve the problem was insignificant (95% CI between -.54 and .22).

Study 2 aimed to replicate the result of study 1 using a different scenario and also to further investigate the effect of the type of service agent on consumers' reuse intention. Participants were asked to imagine that they need to cancel their iPhone order through a service agent using Apple's official Twitter account. They were then shown the screenshot of a conversation and were asked to pretend it was the one they had with the service agent. In the conversation screenshot, the service agent was either claimed to be a human or a chatbot powered by AI technology, depending on which condition was assigned. To manipulate the request handling status, the service agent either successfully canceled the order (success condition) or failed to do so (fail condition). Participants were recruited via MTurk (N = 399, M_{age} = 29.4, 99 female). Both the perceived willingness to solve the problem (α = .85) and trust in the company (α = .90) were measured using the same items used in study 1. The future reuse intention toward the service agent was also measured on a 7-point scale ("I will contact the service agent if I have problems in the future."). The results showed that both participants' trust ($M_{chatbot}$ = 5.22, M_{human} = 4.95; p =.05) in the company and future reuse intention of the service agent ($M_{chatbot}$ = 3.45, M_{human} = 2.94; p =.001) was higher when they were told the unresolved service request was handled by a chatbot (vs. human) service agent. Importantly, both the effect from the type of service agent on participants' trust in the company and the effect from the type of service agent on their future reuse intention of the service agent was mediated by the perceived willingness to solve the problem (for trust: 95% CI between .001 to .49; for reuse intention: 95% CI between .004 to .29), but only when the service request was successfully resolved. The indirect effects were insignificant when consumers' order was successfully canceled.

The findings of the two studies were consistent with our hypotheses that when consumers' service request is rejected by a chatbot agent, their trust in the company and their future reuse intention of the service agent will be less damaged than when the request is rejected by a human agent. We found that the reason for this disparity is that people perceive chatbots are more willing to solve service problems than human agents.

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The Heightening Effect of Temporal Landmarks on Regulatory Resources

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INTRODUCTION

In daily life, people often need to face some difficult decisions, for example, choose to start working immediately or delay for a while? When it comes to diet, choose tasty but high-calorie diet or not-so-tasty but low-calorie food? In the face of a wide variety of products, how to determine whether the product is worth buying? Research shows that people need the support of regulatory resources when they are dealing with difficult jobs or self-regulating tasks, such as resisting temptation and identifying information, but the nature of regulatory resources is limited (Baumeister, Bratslavsky, Muraven, & Tice, 1998). As an old Chinese saying goes, "when one drum is beating, the morale of the soldiers will be the highest; when the second drum is beating, the morale of the soldiers will be gradually decreasing; when the second drum is beating, the morale of the soldiers will be gradually decreasing. When people lack regulatory l resources, they are more likely to be emotional and irritable, and more likely to smoke, overeat, overdrink and so on. In addition, researchers in University of Bristol analyzed 800 million tweets across 57 cities by machine learning, and find that human thinking mode vary with the time of the day and people tend to be positive and motivated in the morning and negative in the evening(Dzogang, Lightman, & Cristianini, 2017). These phenomena show that people's regulatory resources change over time. So we propose a question whether the temporal landmark (i.e. the beginning time, such as the first time, the beginning of the year, etc.) can heighten regulatory resources.

Regulatory resources is important variable in consumer behavior. Lack of resources may cause the failure of self-regulation (Baumeister & Heatherton, 1996), yielding to temptation and impulsive consumption(Baumeister, 2002). Besides, consumers need sufficient resources when information processing, so regulatory resources affect consumer acceptance of advertising information(Wan, Rucker, Tormala, & Clarkson, 2010).Understanding the antecedents of regulatory resources not only helps to increase our understanding of self-regulation behavior, but also helps to formulate marketing strategies for marketing practice. For example, marketers can choose the right promotion time and adopting strategies to adjust consumers' regulatory resources.

This paper focuses on the heightening effect of temporal landmarks on regulatory resources. Some scholars suggest that task interruption, rest and relax, and other activities can promote resources level (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014), but there is a little research on context variables. Understanding how context variables affect regulatory resources and thus consumer behavior can help marketers make more effective use of regulatory resources.

We propose a question of whether the temporal landmark can heighten the perceived regulatory resources. Previous studies have shown that regulatory resources, as abstract psychological variables, are also manifested in people's attitudes and behaviors. For example, consumers with high regulatory resources are better able to regulate themselves and are more willing to choose unpalatable but healthy food. Consumers with low regulatory resources are less likely to process information, more likely to use intuitive thinking and more likely to trust advertising content (Wan et. al, 2010). So, if the temporal landmark increases regulatory resources, will it be reflected in consumer behaviors such as food selection and advertising persuasion?

REGULATORY RESOURCES

Previous studies have shown that selection and decision-making, coping with stress, self-regulation and other behaviors needing self-control require the exertion of certain internal resourcess akin to energy or power, and this kind of internal resources is limited (Baumeister and Bratslavsky et al., 1998). If self-control is required in the previous task, people will perform worse self-control in the following task (Baumeister and Bratslavsky et al., 1998). Muraven and Tice et al., 1998; Vohs and Heatherton, 2000; Wallace and Baumeister, 2002). Specifically, when people deliberately suppress their thoughts, resist temptations, inhibit emotion, recall frustrated experience, regulatory resources will be consumed. After the exertion of regulatory resources in primary work, participants persisted for shorter time, and were easier to give up (Muraven and Baumeister, 2000;Vohs and Heatherton, 2000; Muraven and Slessareva, 2003; Lin and Johnson, 2015). In one study, people who restrain their eating for long generally ate less than those who were on a regular diet, but ate more when they felt anxious (Herman and Polivy, 1975). The line of research shows that when the regulatory resources is abundant, people can carry out effective self-regulation, however, when resources is exhausted, people are more likely to fail in self-regulation. It is worth noting that the regulatory resources are not necessarily the actual resources. The perceived regulatory resources are sufficient for self-regulation(Clarkson, Hirt, Jia, & Alexander, 2010).

Regulatory resources are important in marketing. A large number of consumer behaviors involve self-control, such as self-discipline behavior, resisting temptations , impulse consumption, etc (Baumeister, 2002). Consumers with abundant resources tend to make choices to meet long-term interests instead of short-term enjoyment. Besides, regulatory resources will also affect the cognitive efforts that consumers are willing to make when faced with persuasive information, and thus affect the degree of information processing. Therefore, depleted individuals have more intuitive thinking than thoughtful thinking(Pocheptsova, Amir, Dhar, & Baumeister, 2009). When consumers are exhausted by previous tasks, they are more likely to be persuaded. Even when faced with plausible and suspicious information, depleted consumers will default to the correctness of information (Wheeler, Briñol, & Hermann, 2007). Wan et al (2010) showed that even if consumers have the same attitude towards exaggerated advertising, consumers with exhausted resources tend to be more certain of their attitude, because they think they have already made plenty of efforts to process information.

Regulatory resources is not static. Individuals are constantly acquiring resources and investing resources. Therefore, resources are dynamic and fluctuate with time (Halbesleben and Neveu et al., 2014). Certain conditions can recover and replenish resources. Previous studies have shown that rest and relaxation (Westman and Eden, 1997; Krajewski and Sauerland et al., 2011), or engaging in activities unrelated to tasks (Fritz and Sonnentag, 2005), have positive effects on the recovery of regulatory resources.

Previous studies show that regulatory resources have an important impact on consumers' decision-making and behavior. However, previous studies have focused on the consequences of regulatory resources, but few studies explored the antecedents of regulatory resources, especially the context factors.

TEMPORAL LANDMARKS

Time is one of the important context factors that shape people's cognition and behavior(Goldenberg, Mccoy, Pyszczynski, Greenberg, & Solomon, 2000). Some particular moments in life will affect people's preferences, goals and choices. For example, people have different thinking modes at different times. Morning is more likely to focus on the future than afternoon, and their behaviors are more forward-looking (Li, 2018). Individuals are more likely to set a goal at the beginning of one period such as a New Year, a new semester, after moving to a new house (Dai and Milkman et al., 2015). These temporal landmarks can be social construction and public event points, such as New Year festival and religious date, or be significant personal events, such as entering college, start working, getting married, having children and other milestones in life. These special moments or events that divide the continuous time into different time periods indicate that a new time cycle and encourage people to set and pursue life goals. Such phenomenon is called "fresh start effect".

Similar to geographical landmarks which can shape people's perception of space, temporal landmarks divide people's life into different cycles and lead to different psychological perceptions of the same self in different periods (Peetz and Wilson, 2013). Generally speaking, people will feel connected to the recent self and less connected to remote self. Temporal landmarks make people perceive they have changed a lot compared to the remote self and treat remote self as "social others"(Bartels and Rips, 2010).

Temporal landmarks make individuals form different mental accounts (Dai and Milkman et al., 2013; Peetz and Wilson, 2013), further influencing people's self-evaluation at different times. In order to maintain a higher evaluation of the present self and maintain self-esteem, people tend to underestimate the past self and overestimate the present self, so that they can perceive that they are in the process of continuous progress (Wilson and Ross, 2001).

People tend to think they are better than they were, even though they are not that better. People attribute past failures to a mental account and psychologically disconnected to previously imperfect selves. Previous studies suggest that when temporal landmarks indicate a new start, people are more motivated to show more positive goal-pursuing behaviors and pay more attention to fitness, smoking cessation, education, financial management and other activities to achieve personal goals (Marlatt and Kaplan, 1972; Norcross and Ratzin et al., 1989; Norcross and Mrykalo et al., 2002; Dai and Milkman et al., 2013; Peetz and Wilson, 2013). Dai(2015) analyzed the second-hand data of Google search and found that at the beginning of new calendar cycles such as Monday, the 1st day of the month and January, the word "diet" was searched the most frequently. The temporal landmarks increase the perceived difference between the current situation and the ideal situation in the future, thus triggering a strong motivation for people to bridge the gap. For example, if there is a gap between current health status and future expected health status, people are more likely to make healthy decisions (Peetz and Wilson, 2013).

TEMPORAL LANDMARKS AND REGULATORY RESOURCES

Temporal landmarks not only affect people's psychological perception of time, but also affect people's mindset. Price and Coulter et al.(2018) believe that restart is not only a behavioral effect under some temporal landmarks, but also a reflection of people's mindset, that is, regardless of the past and present, people have the ability to get a new start, which is called "fresh start mindset".

The activation of this mindset will affect people's subsequent preferences, goals, choices and behaviors(Freitas, Gollwitzer, & Trope, 2004). When people get a fresh start, they will see the present self as a new version of themselves, better than the past one, which means that past mistakes are cleared away and past failures are forgiven. Coping with negative emotions will consume a lot of regulatory resources and increase ego-depletion(Johnson, Chang, Meyer, Lanaj, & Way, 2012). When people no longer need to cope with frustration, failure, depression and other negative emotions, they will have more resources to pursue goals. On the other hand, a new beginning is a metaphor for hope, optimism and a bright future.

People set goals at the moment of a fresh start, imagine how the goals will be achieved in the future(Polivy, 2001), and have more confidence about bright future. Such positive associations can offset the past imperfection (Muraven & Slessareva, 2003) and make people focus on the ideal future state. Focusing on how to succeed consumes less resources than on how to avoid failure (Lin & Johnson, 2015).

From what has been discussed above, we propose that temporal landmarks can heighten perceived regulatory resource.

Hypothesis 1   Individuals have more regulatory resource when they get a fresh start.

Regulatory resources can influence consumers' self-control, and thus influence their choice between unhealthy but tasty food and healthy but unpalatable food, which involves a conflict between the long-term interests and the short-term interests. Choosing unpalatable food results in negative experiences, which need regulatory resources to overcome.

Hypothesis 2a: Individuals are more likely to choose unpalatable but healthy food at temporal landmarks.

Hypothesis 2b: Regulatory resource mediate the effect of temporal landmarks on food choice.

In daily life, some advertisements will not only introduce their own products, but also spread some product-related knowledge to consumers. For example, skincare advertisements will introduce the function of product ingredients. Therefore, consumers have extra information to process. Previous studies have shown that consumers with abundant regulatory resources have higher processing degree of information. Barden and Petty (2008) found the mere perception of elaboration can create attitude certainty. Therefore, we propose that when consumers get a fresh start, they are more likely to believe advertisements that delivery knowledge because they have processed those information.

Hypothesis 3a   Individuals are more likely to believe advertisement that delivery knowledge at temporal landmarks.

Hypothesis 3b   Regulatory resource mediate the effect of temporal landmarks on belief of advertisement.

Study 1

All the experimental procedures were completed by questionnaire. The 132 participants completed the experiment in the afternoon and evening of the two days. For the temporal landmark condition, the participants completed the questionnaire on Monday morning (am 9-11) and afternoon (pm 3-5). The participants were told that "Monday is a new beginning". For the control group, the participants completed the questionnaire on Thursday morning and afternoon. Next, all participants were told to take part in another sur-

vey about their eating preferences. They chose between two types of food: cheese bread and whole wheat bread.

The description of cheese bread is "creamy, rich in taste, with a cup of black tea, bring a good and comfortable mood!" While graham bread is advertised as "light in taste, rich in a variety of nutrients, low in calories, a healthy choice!" The participants chose one of two types of bread for breakfast.

Dependent Variable. We calculate the percentage of healthy food choice as dependent variable.

Regulatory resources as the mediator. We adopted scale developed by Hunter, E. M., & Wu, C. (2016) as a measurement. The scale contains three questions "What is your current level of energy?" "What is your current level of motivation?" and "What is your current level of concentration?"

Results

Manipulation check. We checked perception of a new beginning. Compared with the control condition, the temporal landmark condition on Monday was more significantly to perceive "today is the start of a new" ($M_{temporal\ landmark}$ = 5.69, SD = 1.53 $M_{control}$ = 4.69, SD = 2.28, F = 19.98, p = 0.000). Therefore, our manipulation is successful.

We examined whether the time mark significantly affected the participants' food selection. Chi-square analysis with the selection percentage of the participants as the dependent variable showed that the temporal landmark had a significant main effect on consumers' virtue product selection (p=0.047).Compared with the control group (n=51), the proportion of graham bread in the time marker group (n=81) was higher (p time start =54.9%, p control =35.8%).

The temporal landmark also have a significant effect on regulatory resource. Compared with participants in control condition, those in temporal landmark condition have significantly more regulatory resources ($M_{temporal\ landmark}$ = 5.039, SD = 1.28, $M_{control}$ = 3.913, SD = 1.16, F = 1.649, p = 0.000).

The results indicated that compared with the control condition, the participants who started the "new beginning" were more willing to choose virtue food, that is, the temporal landmark could significantly facilitate virtue food selection.

Next, we tested the mediator of regulatory resources by Bootstrap method with the choice of bread as dependent variable and gender as control variables, selected 5000 sample, the mediation test results do not contain 0 under the 95% confidence interval (LLCI = 0.0057, ULCI = 0.6431).

Above all, the study 1 confirm H1, H2a and H2b.

Study 2

To test the effect of fresh start, we randomly selected a day and manipulated it as the temporal landmark or an ordinary day. We recruited 102 participants through the Internet. Participants were randomly assigned to one of two experimental conditions: the temporal landmark condition and the control condition.

The temporal landmark condition asked participants to read and transcribe a sentence about a new beginning, "today is the first day of the rest of their lives, a new beginning." In the control condition, participants were asked to read and transcribe alternative sentence, " Long life, every day in the repeat, it is the ordinary life and ordinary day ". The participants then answered "to what extent do you feel today is a new beginning?" on a seven-point scale.

Then the participants were asked to read an advertisement about a toothpaste. In addition to the product, the advertisement also introduced the ingredients of the product and the function of each product. After reading the advertisement, the participants were asked to answer the questions "to what extent do you think the advertisement is credible".

Regulatory resources is the mediator and measured as study 2.

Results

Manipulation check. We checked perception of a new beginning. Compared with the control condition, the temporal landmark condition on Monday was more significantly to perceive "today is the start of a new" ($M_{temporal\ landmark}$ = 5.61, SD = 1.23, $M_{control}$ = 3.92, SD = 1.65, F =3.71, p = 0.000). Therefore, our manipulation is successful.

We examined whether the time mark significantly affected the participants' trust in the advertisement by ANOVA analysis. The results indicated that fresh start significantly affect consumers trust on the advertisement. Specifically, participants are more likely to think the advertisement is credible than those in control condition ($M_{temporal\ landmark}$ = 4.59, SD = 1.58, $M_{control}$ = 3.85, SD = 1.79, F =0.27, p = 0.028).

Next, we tested the mediator of regulatory resources by Bootstrap method used in study 2. The mediation test results do not contain 0 under the 95% confidence interval (LLCI = 0.0434, ULCI = 1.3379).

Above all, the study 1 confirm H3a and H3b.

DISCUSSION

Regulatory resources are related to many decision-making behaviors and they are useful in resisting temptation, delaying gratification and dealing with difficult work tasks(Baumeister, 2002). However, extant researches focus on outcome variables such as regulatory resources, self-regulation behavior and information processing behavior, and there are few researches on preconditions of regulatory resources.

Understanding which factors affect regulatory resources and how to influence consumer behavior is of great significance to help consumers make reasonable marketing policies.

Based on the influence of temporal landmark on regulatory resources, this study supplemented this field to a certain extent. The results obtained through three experiments are as follows :(1) Temporal landmark has a significant positive impact on regulatory resources, that is, activating the concept of temporal landmark, consumers' regulatory resources will be restored to a certain extent.(2) Temporal landmark can affect the behavioral manifestation of regulatory resources, that is, healthy diet choice. Consumers who start temporal landmark have higher regulatory resources, so they are more able to resist the temptation of unhealthy but delicious food and more likely to choose healthy food.(3) Temporal landmark can affect regulatory resources, and then affect consumers' cognitive efforts in information processing. People are more willing to believe processed information. As a result, at temporal landmark, people have more trust in advertisement that delivers knowledge.

The theoretical contributions of this study are mainly reflected in the following three aspects: (1) This paper first discusses the influence of the temporal landmark on regulatory resources, and further enriches the research on the relationship between time mark as a context factor and individual psychological variable -- regulatory resources. (2)This paper has made contributions to the food consumption-related fields. This paper explores the influence of time onset on food selection and examines the mechanism of regulatory resources as mediating variables. (3)This paper makes contributions to the field of information persuasion. This paper not only supports previous studies on the relationship between regulatory resources and information persuasion, but also further discusses the relation-

ship between a context factor such as the temporal landmark and advertisement trust.

The practical significance of this study is to provide some reference for marketers to formulate marketing strategies. For example, when making marketing plans for health products, we can make full use of the beginning of the year. At this time, consumers have the higher resource to refuse unhealthy products. We can help improve consumer self-control and increase consumers' willingness to buy health products. The experiment in this study also shows that even at ordinary time points, through appropriate manipulation, consumers can perceive it as the "temporal landmark ", thus influencing their attitudes and behaviors.

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Play It Again, Sam! An Empirical Examination
of the Volitional Reconsumption's Motivations and Behavioral Consequences

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EXTENDED ABSTRACT

Volitional reconsumption (VR) refers to "experiences that consumers actively and consciously seek to experience again" (e.g., re-watching a movie, re-visiting a vacation; Russell and Levy 2012). Marketers attempt to capitalize on VR by relaunching cherished series, remaking classic films, or making popular books into movies. However, little work provides insight on how to encourage such reconsumption, who to target, or how to fully capitalize on it. The present work addresses these gaps.

We identify both "Attitude" and "Motivation" dimensions of VR and validate measures for each. We demonstrate that VR-Attitude predicts the frequency of and willingness-to-pay for VR. We show that VR-Motivation varies in its temporal focus on the past versus the future. These foci lead to distinct reconsumption behaviors, because they reflect consumers' focus on different dimensions (e.g., preserving past memories vs. learning and growing). Our work offers several contributions.

Theoretically, we position VR in a valid nomological net, demonstrating its discriminant validity from constructs such as loyalty (Oliver 1999) and variety-seeking (Kahn 1995). Further, we identify which motivations for VR are central to consumer behavior, and we apply these motivations to identify novel downstream behaviors.

Practically, we offer marketers easy-to-use tools for segmentation, targeting, and positioning to increase VR even among less interested consumers. We also help marketers target and position extensions of VR experiences.

To begin, three studies validated the VR-Attitude and VR-Motivation measures, resulting in a 3-item VR-Attitude scale and an 8-item, two-factor VR-Motivation scale. The factors represented two temporal foci: past and future (see Appendix A). Four subsequent studies assessed the measure's predictive value.

In Study 4, one subset of participants (N = 183, 50% female, M_{age} = 35.44) recalled a recent purchase of an entertainment experience (e.g., movie), and reported whether they had the experience prior to purchasing it. The VR-Attitude score predicted a 29.6% higher likelihood of prior consumption. A second subset of participants (N = 187, 50% female, M_{age} = 36.65) indicated their reconsumption intentions for previously read books/previously seen movies (8 items; α = .82), and their willingness-to-pay for a special edition DVD of their previously consumed movie (19-point scale; $0-$50+). VR-Attitude significantly predicted both VR intentions (β = .35, $t(185)$ = 6.77, p < .0001) and willingness-to-pay (β = .47, $t(185)$ = 2.73, p < .01). Across both sets of participants, scales nomologically related to VR (in study 3) did not predict these behaviors as consistently as VR-Attitude, and VR-Attitude predicted behavior even when controlling for these related constructs.

In Study 5, we predicted high (low) VR-Attitude scores would result in preference for a previously experienced (new) option. We expected this pattern to attenuate when the unknown option was inferior. In a between-subjects study, participants indicated a preference between a movie they had seen and liked and a new movie about which they either knew nothing (uncertain) or knew the rating was lower (inferior). We found the predicted interaction of movie condition by VR-Attitude ($F(1, 228)$ = 4.55, p < .05). As predicted, when the new movie was inferior, the VR-Attitude measure did not affect preferences ($t(228)$ = .12, p > .80). Further, when the new movie was

uncertain, the VR-Attitude measure significantly affected behavior (β = .42, $t(228))$ = -3.00, p < .005), such that participants with low VR-Attitude scores were more likely to choose the new, uncertain movie (M = 6.01) than participants with high VR-Attitude scores (M = 5.01).

In Study 6, we examined the pas-focused motivation, which is centered on reliving and re-experiencing for the sake of remembering prior moments. Consumers with high scores should be sensitive to conserving the integrity of reconsumed experiences (Elster and Lowenestein 1992). Thus, we predicted that if a negative event occurred while reconsuming, consumers with high scores would seek to repair that experience and its memory (Loftus 1981) by returning to the same location, in order to have the experience again without the negative event.

Undergraduates (N = 178) imagined revisiting a hotel where they had previously had many positive experiences; during their stay they experienced either a minor or major (temporary) service failure (we predicted robustness across conditions). We measured participant's likelihood of purchasing a voucher for a discounted future visit (7-point scale). An ANOVA showed only a significant main effect of the past motivation ($F(1, 176)$ = 7.13, p < .01); hence, the data was collapsed. As expected, participants with high past-focus scores were significantly more likely (β = .31, t = 2.67, p < .01) to purchase the voucher and return to the hotel (M = 5.47) than participants with low past-focus scores (M = 4.85).

Two final studies explored the future-focused motivation for VR. We proposed that this motivation's focus on growing and learning would lead consumers to be more accepting of change in a reconsumed experience. To test this prediction, Study 7 (undergraduates, N = 156, 44% female, M_{age} = 21.78) explored how much participants would be willing to pay to see an extension of a movie they liked before opening night (slider scale, $0-$10). Planned spotlight analysis showed that participants with high future-focus scores were willing to pay more to attend the early viewing of a sequel than participants with low future-focus scores (β = .66, $t(151)$ = 3.20, p < .005).

Study 8 replicated these findings using survey data about Star-Wars. Participants (MTurk, N = 142; 47% female; M_{age} = 34.72) with high future-focused motivation scores indicated more positive feelings regarding the change in ownership of the Star Wars franchise ((β = .23, $t(139)$ = 3.71, p < .0005) and were more likely to have viewed online materials relating to sequel launches (β = .10, $t(133)$ = 1.91, p = .058).

In sum, the present work offers new wisdom about an understudied construct: VR. We empirically and conceptually enhance the field's understanding of this concept by creating a VR measure, identifying VR's different motivational dimensions, and showing their divergent effects. This offers marketers a new segmentation tool and a new way to think about repeat customers.

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A Wishful Thinking Mindset Leads to a Desire for Chaos

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EXTENDED ABSTRACT

Consumers often engage in wishful thinking in various domains. Specifically, consumers can hope for a favorable outcome but at the same time know that the prospect of such an outcome is extremely low. In this research, we examine how engaging in such wishful thinking may induce a mindset, which affects consumer judgments and decisions in unrelated domains.

This research provides support for the existence of the wishful thinking mindset and argues that such a mindset activates a desire for chaos because consumers believe that chaos in the external environment can increase their chances of realizing an otherwise unlikely, yet desired, outcome. Further, we posit that this wishful thinking mindset will have several downstream consequences on consumer decisions. While a desire for order increases the likelihood of following one's personal norms and routines (Cutright 2012), preference for social norms (Lin, Dahl, and Argo 2013; Zakrisson 2005), and avoidance of disruptive products (Faraji-Rad, Melumad, and Johar, 2017), a desire for chaos should lead to the opposite effects and increase the likelihood of deviating from personal and social norms and preference for disruptive products. We present six studies to test our proposition.

Studies 1 and 2 examined whether wishful thinking, induced by hoping for a low (vs. moderate or high) prospect outcome, leads to deviation from personal norms and social norms in an unrelated situation. Specifically, participants first completed essay-writing tasks that led them to think about situations in which their prospect of winning was low, moderate, or high. Next, participants proceeded to an ostensibly unrelated second survey. In study 1, the survey asked participants to indicate whether they would choose a drink that they order every time or a new drink that they had never tried before, if they were ordering drinks while dining at a local restaurant. Compared with participants in the moderate-prospect or high-prospect conditions, participants in the low-prospect condition were more likely to choose a new drink over a drink they normally order.

In study 2, the survey asked participants to complete the Right-Wing Authoritarianism (RWA) scale (Zakrisson 2005), which is widely used to measure the extent to which people adhere to societal norms. Participants in the low-prospect condition reported lower RWA scores (greater tendency toward violating social norms), compared with participants in the moderate-prospect or high-prospect conditions. Thus, these two studies show that engaging in wishful thinking can lead to deviation from personal and social norms in unrelated domains.

Study 3 examined whether wishful thinking leads to a preference for disruptive products and whether this effect is driven by a desire for chaos. The study followed a 2 (prime: low-prospect vs. high-prospect) × 2 (framing: disruptive vs. normative) between-subjects design. Given the results of the moderate-prospect condition and the high-prospect condition were similar in prior studies, we only included the high-prospect condition. Subsequent to the same wishful thinking mindset manipulation used before, participants evaluated an art exhibition that was presented as either disruptive or normative. When presented as disruptive, the exhibition was evaluated more favorably in the low-prospect (vs. high-prospect) condition. However, the prime did not affect the evaluation of the normative exhibition. Participants also reported their attitudes towards chaos, which formed the desire for chaos measure. Moderated mediation analysis confirmed that the effect of wishful thinking on more favorable evaluation of disruptive (vs. normative) exhibition was driven by an increased desire for chaos.

Study 4 used the opportunity of the 2018 NBA Finals in which the Cleveland Cavaliers were regarded as the underdog team (ESPN 2018). We investigated whether wishful thinking caused by being a supporter of the underdog team would affect one's preference for a disruptive company in investment decisions. The results confirmed that supporters of the underdog team (Cleveland Cavaliers) who expected the prospect of their team winning to be very low exhibited preference for a disruptive company in an investment decision.

Studies 5 and 6 investigated why wishful thinking leads to a desire for chaos. Specifically, we examined whether perceiving the world as chaotic can increase wishful thinkers' subjective estimation of their chances of obtaining the unlikely, yet desired, outcome. In study 5, participants entered a real lottery for a chance to win additional payment. The study followed a 2 (winning prospect: low vs. high) × 2 (prime: chaos vs. baseline) between-subjects design. To manipulate wishful thinking, we varied the prospect of winning the prize to be either very low (1%) or moderate (20%). Subsequently, participants were asked to either write down one example of the factors that contribute to chaos (chaos-prime) or write down how they spent the past day (baseline). Participants then estimated their chances of winning the prize. For participants in the low-prospect condition, perceived chances of winning increased if participants were led to believe the world is chaotic than not. However, the prime did not affect perceived chances for those in the moderate-prospect condition.

Study 6 examined whether hoping for the favorable outcome is a necessary condition for the wishful thinking mindset to occur. We manipulated whether consumers focused on the favorable outcome (winning) or the unfavorable outcome (losing) associated with a low-prospect event. The study followed a 2 (focus: favorable-outcome vs. unfavorable-outcome) × 2 (prime: chaos vs. baseline) between-subjects design. In the focus-on-favorable-outcome (vs. focus-on-unfavorable outcome) condition, participants imagined they bought a Mega Millions lottery ticket and wrote about what they would do and how they would live their lives if they won (vs. did not win) the lottery. After completing the same chaos-prime or baseline task of study 5, participants were asked to think about the Mega Millions lottery again and estimate their chances of winning. For participants who focused on the favorable outcome, the perceived chances of winning increased if they were led to believe the world is chaotic than not. However, for participants who focused on the unfavorable outcome, this effect was reversed.

In sum, this research shows that wishful thinking can instigate a desire for chaos and that this effect occurs because consumers believe chaos boosts their chances of realizing the otherwise unlikely outcome.

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Quantity Modifier Modifies Quality

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EXTENDED ABSTRACT

Quantity modifiers (QMs) are widely used in everyday language. In an examination of a corpus of over 6 billion words, I find that, in at least 10% of the cases where a number is used, the number is modified by a QM. QMs are even more frequently used in marketing communication, where quantity information is often central. The present research provides a first systematic investigation of this class of linguistic expressions by comparing high QMs -- QMs that convey large magnitude judgment such as "as many as," "more than," and "an entire," and low QMs -- QMs that convey small magnitude judgment such as "as few as," "less than," and "only." Across seven studies, I find that using a QM to describe a quantity can affect listeners' judgment of the quality-related attribute of the target, a domain to which QMs do not normatively speak. For example, making a comment that an amusement park has "as many as 10 rides" will leave readers an impression that the rides are more thrilling than a comment that the park has "only 10 rides."

We argue that this effect is driven by an inference process based on the Logic of Conversation. The fact that the speaker uses a high or low QM conveys her overall attitude toward the target, based on which the listeners will form an overall judgment of the target; the fact that the speaker did not provide additional statement to correct this listener's judgment suggests that her evaluation of the central attribute of this target aligns with this conveyed overall attitude -- if she indeed held the opposite attitude toward the central attribute, the cooperative principle of conversation (Grice 1975) requires her to say so.

Two studies support this mechanism. In one study, participants imagined that a friend said that a new rollercoaster park had "as many as [less than] 10 rollercoasters." They were first asked to judge whether 1) the rides were thrilling or boring, 2) the rides were long or short, 3) the bodies of the trains were beautiful or ugly, and 4) the seats were comfortable or uncomfortable. Then, they reported how important they thought these attributes were in determining whether a rollercoaster would be considered as good. A mixed linear model shows that the interaction between QM and the importance of the attribute was significant in predicting each participant's judgment of that attribute, suggesting that the more important a participant considered an attribute is, the greater extent to which her judgment of that attribute was affected by the QM. This finding is consistent with the inference that if the important attributes were negative, the speaker would have said so to correct the listener's overall judgment about the target; if the unimportant attributes were negative, the speaker may not have the need to correct listener's overall judgment. Therefore, the fact that speaker did not correct listeners' overall judgment is more diagnostic to the important rather than unimportant attributes.

In the other study, half of the participants (the "evaluation" conditions) imagined that they were asking their cousin about his school cafeteria. Depending on the condition, the cousin said that the cafeteria offered "as many as 5 entrees," or "as few as 5 entrees." The other half of the participants (the "memory challenge" conditions), instead, imagined that they were playing a game called "memory challenge" with their cousins in which they asked the cousin to recall the number of entrees offered by his school cafeteria. The cousin also answered: "as many as 5 entrees" or "as few as 5 entrees." All participants judged the taste of the entrees. In the evaluation conditions, replicating study 3, "as many as 5 entrees" were judged as tastier than "as few as 5 entrees." In the "memory challenge" conditions, this difference was eliminated, yielding a significant interaction between communicative purposes and MQs. This result suggests that if the communication is not evaluative in nature, QMs will not be interpreted as conveying the overall evaluation of the target in the first place; not providing correction in this case is not diagnostic about the central attributes of the target.

This effect is not driven by a quantity-quality association, that is, the judgment of the quality-related attribute is not driven by participants own magnitude judgment. In the last study, participants imagined that they were asking their cousin about the cafeteria at his school. Depending on condition, the cousin said that the cafeteria offered "an entire 5 entrees" or "only 5 entrees." Half of the participants also learned that school cafeterias in this district typically offer 8 entrees (in the "an entire 5 entrees" condition) or 3 entrees. That is, they were given an explicit reference point that could potentially lead them to make a magnitude judgment that is opposite in direction to what the QMs would otherwise suggest. The other half was not provided that information. In a counter-balanced order, participants were asked to guess what the entrees tasted like and to evaluate the number of entrees offered at this cafeteria, both on 7-point scales. A significant interaction emerged for magnitude judgment: "an entire 5 entrees" led to a higher magnitude judgment than "only 5 entrees". Yet, when "an entire 5 entrees" was compared to "8 entrees," participants judged the number as lower than when "only 5 entrees" was compared to "3 entrees;" in contrast, participants believed that "an entire 5 entrees" tasted better than "only 5 entrees" regardless of whether reference points were provided, reflected in a main effect of QMs, but no significant interaction. Thus, the taste judgment was not affected by their judgment of whether the number of dishes was large or small.

The present research provides a first investigation of how QMs affect listeners' inference and judgment. It extends our understanding of how subtle differences in language could have significant and often unexpected impacts on judgments. It also adds to the growing body of literature of the impact of language use in marketing communication and word-of-mouth.

The Influence of Social Crowdedness and Competitiveness on Status Consumption

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EXTENDED ABSTRACT

Social crowding is ubiquitous. Research has shown that crowdedness increases people's perceived physical threats, because from an evolutionary perspective, attacks from enemies occur most likely from close proximity (Burgoon 1978). Therefore, perceived physical threats activate a defensive system to protect one from potential dangers and hence a greater preference for safety products (Maeng et al. 2013).

While some might perceive physical threats from crowded environments, we propose that some might interpret it as social threats. O'Guinn et al. (2015) suggested that social density serves as an inference of social class. Powerful individuals use large territories to show their superiority over others. Hence, crowded environments that constrain personal territories potentially create social threats on their perceived superiority (Consiglio et al. 2018). However, we argue that not everyone will perceive such social threat, because individuals differ in their motivation to demonstrate their superiority over the others, or simply their motivation to compete (Garcia et al. 2013; Spences and Helmrech 1983). Hence, we predict that while low competitive individuals might perceive physical threats from crowded environments, high competitive individuals might interpret it as social threats. To overcome the social threat, competitive individuals would be more motivated to engage in status consumptions, which allows them to demonstrate their superiority over others (Hennighausen et al. 2016). Thus:

Hypothesis 1   *In a crowded environment, competitive motivation increases preference for status consumption, and such effect is less evident in an uncrowded environment.*

To test our hypothesis, we conducted 5 experiments. Experiment 1 provides preliminary support for our theory. We first showed participants (N=209, Prolific) an image of either a crowded or an uncrowded street. Next, they indicated their preference between a safety car and a luxury car (1 /7 = definitely choose the safety car / the luxury car). Finally, they answered the Competitiveness Index. Results showed a significant interaction ($F(3,205)=2.60$, $p=.05$). High competitiveness participants (+1 SD) preferred the luxury car in a crowded environment ($M_{crowded}=4.13$ vs. $M_{uncrowded}=3.35$). In contrast, participants with low competitiveness (-1 SD) had no difference in their preference ($M_{crowded}=3.01$ vs. $M_{uncrowded}=3.57$).

Experiment 2 aimed to manipulate competitiveness in a 2 (crowded vs. uncrowded) × 2 (competitive vs. control) between-subjects design (N=228, Mechanical-Turk). We primed competitiveness using either competitive or neutral words in a word-completion task. The manipulation of crowdedness was the same as experiment 1. They then indicated their preference between a first aid kit and a designer Starbucks coffee mug (1/ 7= definitely choose the first aid kit / Starbucks coffee mug). Results revealed a significant interaction ($F(1,224)=3.72$, $p = .05$). Competitive participants preferred status product in a crowded environment ($M_{crowded} = 3.76$ vs. $M_{uncrowded} = 3.00$) while control participants had no difference in their preference ($M_{crowded} = 3.00$ vs. $M_{uncrowded} = 3.34$).

While the earlier studies looked at the preference between safety and status products, Experiment 3 examined the status product alone, thereby ruling out the alternative account that our effect was driven by a decrease in liking for safety products. Further, this experiment manipulated both crowdedness and competitiveness in a naturalistic setting. This study used a 2 (crowded vs. uncrowded) × 2 (competitive vs. control) between-subject design. We assigned either 2 or 10 participants (N=144) in a small room. Next, in the competitive condition, participants were told that they had to compete with others in a test to get the reward. In the control condition, the reward was solely based on their own performance. They then indicated how much they were willing to spend on status signaling products (i.e., shoes) compared to their peers on a 9-point scale. Results showed a significant interaction ($F(1, 140) = 4.48$, $p < .05$). Crowdedness increased the preference for status products in competitive condition ($M_{crowded} = 6.99$; $M_{uncrowded}=6.06$) but not in control condition ($M_{crowded} = 6.04$; $M_{uncrowded}=6.29$).

Experiment 4 aimed to rule out the alternative account that our effect is driven by having more people around, which provides an opportunity to show off to a larger crowd. Hence, experiment 4 included a crowded-control condition where the number of people remains the same as uncrowded condition while the space was 10 times smaller (i.e., high density). We used a 3 (crowded vs. uncrowded vs. crowded-control) × 2 (competitive vs. control) between-subject design (N=319). We manipulated competitiveness similar to that in experiment 2. Next, participants imagined sitting on a 200-person subway train with 160 (vs. 16) people around them in the crowded (vs. uncrowded) condition. In crowded-control condition, they imagined sitting on a 20-person train with 16 people around them. Using the DV the same as experiment 3, results revealed a significant interaction ($F(2, 313) = 4.30$, $p=.01$). Competitive participants spent more in crowded and crowded-control conditions ($M_{crowded}=4.07$ vs. $M_{crowded-control}=4.01$ vs. $M_{uncrowded}=3.48$) while control participants spent more in uncrowded condition ($M_{uncrowded}=4.22$ vs. $M_{crowded}=3.59$ vs. $M_{crowded-control}=3.58$).

Experiment 5 tested our framework by manipulating the social status of the crowd. If the status of the crowd is lower than them, competitive individuals should feel less social threats and hence less motivated to engage in status consumption. Experiment 5 used a 3 (crowded vs. uncrowded vs. crowded-inferior) × 2 (competitive vs. control) design. First, participants (N=283) recalled a memory of competition or a typical day. Next, participants saw a picture of either a crowded flight (120 passengers on a 120-seats plane) or an uncrowded flight (40 passengers in a 120-seats plane). In crowded-inferior condition, participants were told that some of the passengers were cashiers from a supermarket. Using the DV similar to experiment 4, results showed a significant interaction ($F(2, 277) = 5.78$, $p < .005$). Competitive participant spent more when they are in a crowded environment ($M_{crowded}=4.55$ vs. $M_{uncrowded}=3.54$ vs. $M_{crowded-inferior}=3.85$) while control participants spent more in the uncrowded condition ($M_{crowded}=3.64$ vs. $M_{uncrowded}=4.39$ vs. $M_{crowded-inferior}=3.73$).

In sum, we demonstrate that social crowding increases status consumption among consumers with competitive motivation. This research contributes to the social crowding literature by showing that crowded environments do not always impose physical threats. Instead, social crowding imposes social threats to competitive consumers and increases status consumption.

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Shape Up the Behavior: A Concave Display Board Promotes Charitable Donations

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EXTENDED ABSTRACT

Many marketing communications nowadays are displayed on a surface that is not flat in shape, but with a curvature. For example, an advertisement appears on a large curved board easy for displaying in a corner, or a marketing message is painted on the wall of a curved hallway. Given its ubiquity, an interesting yet important question arises: How marketing messages displayed on a curved surface influence consumer behaviors? Surprisingly, academic research on this question is quite sparse. Prior research on the impact of visual cues, particularly, shape, has primary focused on the shape of the product (e.g., Aggarwal and McGill 2007; Wansink and van Ittersum 2003). It is unclear how the shape of a marketing communication's supporting background would affect consumers' responses. This research seeks to fill this gap by examining this question in the context of charitable donations. Specifically, we study the effect of charitable appeal shape (i.e., concave vs. convex) on consumer donations.

The central thesis is that concave-shaped (vs. convex-shaped) charitable appeals enhance charitable donations. A concave-shaped (convex-shaped) display has a surface that curves inward (outward) like the interior (exterior) of a circle. We expect the effect to occur, because concave-shaped (vs. convex-shaped) charitable appeals may prime the viewers with a need to belong, which subsequently increases their perceptions of self-other overlap, thereby leading to heightened charitable donations. We elaborate our reasoning below.

We first posit that concave-shaped (vs. convex-shaped) charitable appeals may prime a need to belong. This has been supported by research in ergonomics and visual arts. For example, large screen displays with concave curvature would make the viewers feel being surrounded and immersed, thereby stimulating a desire to involve with others (Nichols and Patel 2002). In visual arts, viewers automatically associate concave (convex) shapes in figure sculpture with the concept of interdependence (independence) (Arnheim 1974), which consequently triggers thoughts on connectedness to others (autonomy of selves) (Markus and Kitayama 1991). As such, the concave-shaped (vs. convex-shaped) charitable appeals might may lead to a stronger need to belong. We next argue that such enhanced need to belong subsequently increases perceptions of self-other overlap and ultimately donation behaviors. Prior research suggests that when the need to belong is triggered, individuals are likely to satisfy the need by affiliating and socializing with others (Baumeister and Leary 1995), which leads to an enhanced perception of self-other overlap. Further, it is well established in the prosocial behavior literature that an increased perception of self-other overlap heightens one's willingness to help (Cialdini et al. 1997). Overall, we propose that concave-shaped (vs. convex-shaped) charitable appeals result in a stronger need to belong, which in turn increases perceptions of self-other overlap and subsequently consumers' donations.

We further identify a boundary condition of the effect. Specifically, when the charitable appeal is from an in-group (vs. out-group) organization, the proposed effect of the curvature mitigates. Prior studies suggest that in-group identification leads individuals to experience a heightened perception of self-other overlap with the group members (Smith, Coats, and Walling 1999). Since perception of self-other overlap is the underlying mechanism of our main effect, we posit that when donating to an in-group, consumers experience enhanced perceptions of self-other overlap regardless of the appeal shape, leading to comparable donation behaviors.

Study 1 demonstrated the main effect. Participants (n= 147) were instructed to view a charitable appeal on either a concave or a convex or a flat board, and then indicated donations in dollar amount. As predicted, participants donated more in the concave-shaped condition ($M_{concave}$ = 6.21), compared to the convex-shaped condition (M_{convex} = 4.10; $t(144)$ = 2.32, $p < .03$), or the flat-control condition (M_{flat} = 4.22; $t(144)$ = 2.21, $p < .03$). The contrast between the latter two conditions was insignificant ($t < 1$).

Study 2 provided process evidence by testing the serial mediation. Participants (n = 124) viewed a charitable appeal on either a concave or a convex display wall and indicated their donations. Participants' need to belong (Leary et al. 2013) and perceptions of self-other overlap (Aron, Aron, and Smollan 1992) were also measured on established scales. As predicted, participants donated more in the concave-shaped (vs. convex-shaped) condition ($M_{concave}$ = 9.84 vs. M_{convex} = 5.97; $t(122)$ = 2.05, $p < .05$). The mediation analysis further revealed a significant indirect path from appeal shape to donations through the two mediators of the need to belong and self-other overlap in sequence (95% confidence interval (CI) = [-.77, -.06]).

Study 3 offered further process evidence by satiating the need to belong. Participants (n = 272) first completed a scrambled-sentence task to either satiate or not satiate their momentary need to belong. Next, they viewed a charitable appeal on either a concave or a convex display wall and reported their donations. As predicted, in the nonsatiation condition, the effect replicated that participants donated more in the concave-shaped (vs. convex-shaped) condition ($M_{concave}$ = 12.74 vs. M_{convex} = 7.17; $F(1, 268)$ = 8.90, $p < .01$). Conversely, the effect diminished in the satiation condition that both shapes led to comparable donations ($M_{concave}$ = 9.13 vs. M_{convex} = 8.73; $F < 1$).

Study 4 examined the moderating role of group membership. Participants (n = 238) first read a scenario describing either their in-group or out-group membership of a community park. Next, they viewed a fundrasing appeal of the community park on either a concave or a convex display wall, and indicated their donations. As predicted, for the out-group community park, the effect replicated that participants donated more in the concave-shaped (vs. convex-shaped) condition ($M_{concave}$ = 9.57 vs. M_{convex} = 4.53; $F(1, 214)$ = 8.28, $p < .01$). Conversely, for the in-group community park, the effect mitigated that both shapes led to comparable donations ($M_{concave}$ = 9.87 vs. M_{convex} = 9.76; $F < 1$).

This research contributes to the literature by being the first to establish a novel relationship between charitable appeal shape and consumer donations. Findings of this research offer important practical implications by suggesting a cost-effective approach for charities to increase donations.

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How Much Choice is Too Much?
A Machine Learning Based Meta-Analysis of Choice Overload

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EXTENDED ABSTRACT

Many theories in psychology suggest a monotonic relationship between the provision of choice and well-being -- the more choices, the better -- as the availability or even the perception of choices has been shown to lead to increased intrinsic motivation, life satisfaction, task performance, perceived control, etc. Recently, the growing literature on choice overload has challenged this assumption by demonstrating that having too many choices may be counterproductive. According to the choice overload hypothesis, while an increasing number of available choices will likely have a positive impact on an individual's decision satisfaction (or confidence) at first, the impact will eventually turn negative when the complexity of choice decisions exceeds the individual's cognitive capacities. In other words, the choice-satisfaction function between the number of choices and consumer satisfaction may follow an inverted-U-shape, with satisfaction first increasing before decreasing once the number of choices surpasses an inflection point.

Although there is ample evidence in support of the choice overload phenomenon, the question of exactly when excessive choice may impede decision satisfaction, i.e., exactly where the inflection point is, remains unanswered. Numerous experimental studies have been conducted to compare the effects of two assortment sizes: one small (i.e., fewer choices than ideal) vs. one large (i.e., too many choices). However, different researchers tended to hypothesize different moderating variables and/or measure different outcomes of choice overload (e.g., satisfaction, regret, etc.). Given the widely dispersed results reported by these experimental studies, three prominent meta analyses on choice overload have been conducted. While these meta-analyses identified a set of moderators that likely affect when and why choice overload occurs, the conclusion on the role of these moderators, however, is inconsistent even across the meta-analyses.

In this paper, we identified an important gap in the existing studies of choice overload: the inherent incompatibility between (the common belief of) an inverted-U-shaped choice-satisfaction function and (the near-universal adoption of) two-group experimental design comparing just two assortment sizes (one small and one large). We found that, even when the inverted U shape holds at all times with only small variations of the effect, if the two groups selected in an experiment feature two assortment sizes with roughly equal distance to the inflection point (i.e., peak), then we will likely see widely diverging results on the between-group difference. Unfortunately, many existing studies indeed selected such two assortment sizes, even using manipulation checks to verify that the two sizes likely fall on different sides of the inflection point.

To address this research gap, we developed a meta-analysis to test whether it is possible for the wide discrepancy of results observed in the existing studies for choice overload to be explained by a small between-study variation of the inflection point. We found that answering this question requires solving a bi-level optimization problem, which is known to be computationally difficult to solve or even to approximate. To tackle this challenge, we developed dual-space gradient descent, a novel technique that solves this specific instance of bi-level optimization using gradient descent, an algorithm commonly used in machine learning. By applying dual-space gradient descent on the same set of primary studies analyzed in the two most recent meta-analyses, we found that the estimated inflection points form a tightly squeezed distribution, and a small variation of the inflection point may capture almost all of the residual, between-study, variances. This offers a simpler explanation for the wide discrepancy of existing results: the previously hypothesized moderator variables -- e.g., preference uncertainty, choice set complexity, decision task difficulty, and decision goal -- cause a small variation of the inflection point, which in turn leads to an amplified change of the effect sizes observed in existing two-group experimental studies. In other words, the wide discrepancy of existing results is better attributed to how the prevalent two-group experimental design amplifies the variation of an inverted U-shaped effect, rather than to the inherent complexity or uncertainty of choice overload itself.

Our findings have both research and practical implications on the understanding of choice overload. Research-wise, it suggests that future studies need to vary the assortment size at finer gradation in order to properly understand the non-monotonic effects of choice overload. Practice-wise, this research is a first step toward a proper understanding and estimation of the range of inflection points for various product types, which will provide marketers with actionable guidance in product design.

How Thinking About Donation Decreases Sellers' Subsequent Willingness-to-Accept

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EXTENDED ABSTRACT

One reason preventing people from selling their possessions is the difference between sellers' WTA and buyers' WTP (Carmon and Ariely 2000; Kahneman, Knetsch, and Thaler 1991). In order to encourage product disposition, our research examines how a simple intervention, namely asking sellers to consider donating an object, decreases their subsequent willingness-to-accept for said object. Interestingly, we show that this intervention is more effective for higher attachment possessions.

Feelings of guilt are often accompanied by a sense of personal responsibility, especially when people are aware that they have control over their own behavior (Hoffman 1994). And Furby (1978) found that consumers believe owners ought to take responsibility for and maintain their possessions. Building on the past findings, we argue that people experience a sense of failure at assuming the owner's responsibility when they lose their possessions, which can lead to guilt when it is due to a personally controllable cause, such as deciding to sell possessions.

We further propose that guilt experienced during product disposition can cause an increase in the evaluation of the possession being disposed due to inferences drawn from affective states (Schwarz 1990). Regarding disposition, unpleasant feelings of guilt arise when people think about selling (and consequently losing) their possessions, causing psychological discomfort. If sellers infer their evaluation of possessions from their affective states, negative feelings suggest that the possessions are better than originally thought. Consequently, their valuation increases.

Guilt, like cognitive dissonance, can be relieved by finding justifications (Aronson and Milld 1959; Stice 1992)the number of marchers who cited the charity as a justification for their behavior increased as the march progressed through the first 27 miles. Unexpectedly, the frequency of charity citings was lower at the finish line (35 miles. When owners experience psychological discomfort, they will actively look for ways to justify losing possessions. Charity, which is perceived as an altruistic action, is a good way to justify behavior. When owners consider selling their possessions and experience the feeling of guilt, we can offer them a way to justify of losing their possessions by asking them to consider donating the same possessions to charity. Consequently, possession loss does not seem as bad comparatively and psychological discomfort decreases. When sellers do not feel strong psychological discomfort, their evaluations about the possessions they are selling will not increase. Thus, we hypothesize that individuals will ask for a lower WTA price when they are offered a donation option.

People grow attached to their possessions. Prior research has demonstrated that highly attached sellers often demand a higher selling price in order to offset the greater psychological cost they incur when separating from possessions (Brough and Isaac 2012)classified advertisements, Craigslist, eBay. We expect that highly attached sellers will develop a stronger feeling of guilt from product disposition as their sense of ownership is stronger. They are also more susceptible to the influence of donation on WTA as they experience stronger psychological discomfort and thus are more eagerly seeking behavior justification.

Study 1A had a 2 (consider donation vs. control) x 2 (possession attachment: high vs. low) design and it supports our main prediction and the moderation role of possession attachment. Participants were asked to recall an object. High-attachment condition participants were told that the object had to be something that represented their self-identity (Belk 1988; Ferraro, Escalas, and Bettman 2011) and low-attachment participants recalled an object with no special meaning. Participants were then told to imagine that they came across this object while cleaning and realized they had not used it for more than two years. In the donation consideration condition, participants were told that they could give the object to a local charity. We then measured their donation likelihood and minimum WTA. In the control condition, participants indicated their WTA without being told about donating. ANOVA produced significant main effects and interaction ($F_{(1,206)}=4.07$, $p<.05$). Planned contracts showed that subjects in the high-attachment condition asked for a lower WTA when they were first offered an option to donate ($F_{(1,206)}=14.39$, $p<.01$); No difference was found in the low-attachment condition ($F_{(1,206)}=1.06$, $p=.31$).

Study 1B and 1C replicated study 1A (study 1B: $p<.01$; study 1C: $p<.05$) with different operationalizations of possession attachment and examining only highly-attached sellers. We asked the participants to recall an object that reminded them of their beloved family members (1B) or good memories (1C).

Study 2 tested the mediation role of guilt. We also measured participants' possession attachment and provided additional support for its moderation role. Once participants (consider donation vs. control) provided their WTA, we asked how guilty they felt about selling this object. Moderated mediation analysis (using PROCESS macro, model 7, Hayes, 2013) revealed a significant interaction effect between donation dummy (1 = consider donation; 0 = control) and possession attachment on guilt ($\beta =-.17$, $p<.03$) and a significant effect of guilt to WTA ($\beta =.23$, $p <.01$). The confidence interval of this moderated mediation excluded zero (95% CI [-.09, -.01]), index = -.04), indicating a significant effect.

Study 3 ruled out an alternative explanation of anchoring. Compared to the control condition whose reference point might be the initial cost, participants who consider donation might use $0 as a reference point and consequently ask for a lower WTA. Thus, we added a "discard" manipulation, which also provides a $0 reference point. Participants were asked to recall an object that helped define who they are. The donation consideration and control conditions are similar to previous studies. In the discard condition we asked participants how likely they were to throw away this object and then measured their WTA. WTAs were significantly different between the donation and control groups ($t_{(167)}=2.18$, $p<.02$); However, there was no statistically significant difference between the discard and control groups ($t_{(170)}=.52$, $p=.60$).

To our best knowledge, we are the first to examine the interactions of the two most common product disposition methods - selling and donating. More broadly, we explore the effect of merely considering donation on subsequent economic behavior. This research also has practical implications for second-hand stores/online platforms and nonprofits. Although people might be less likely to donate when they decide to sell their objects, nonprofits can still benefit from marketing its name and cause. For second-hand stores and online platforms, our strategy effectively decreases sellers' WTA and increases the probability of a successful resale transaction.

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Revealing a Weakness Boosts Consumer Perceptions of Human Brand Authenticity

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EXTENDED ABSTRACT

Human brand refers to "any well-known persona who is the subject of marketing communications efforts" (Thomson 2006, 104). The concept of brand has increasingly been applied to specific persons. Brand authenticity consists of "genuineness, reality, and truth" (Beverland and Farrelly 2010, 853). Prior research has shown that consumers seek authenticity in their consumption of objects, experiences, and brands (Beverland and Farrelly 2010). However, little attention has been paid to what contributes to consumer perceptions of human brand authenticity. Limited research on this issue is mostly correlational, making it difficult to identify the causality of the relationships (e.g., Moulard, Garrity, and Rice 2015).

Thomson (2006) underscored the importance of authenticity of human brands. Therefore, academics and practitioners have called for more research examining antecedents of consumer perceptions of human brand authenticity (Thomson 2006; Moulard et al. 2015). The pratfall effect in social psychology shows that a competent person who does not make mistakes seems too good, distant, and nonhuman, i.e., inauthentic (Aronson, Willerman, and Floyd 1966). A recent view holds that companies should not present their CEOs as overly competent to avoid consumers' resistance (Pollach and Kerbler 2011). In consumer psychology, irrelevant negative information of the product actually enhances consumers' positive attitudes, for it promotes consumers' confidence in information completeness (Shoham, Moldovan, and Steinhart 2017). Thus, we propose that revealing a weakness of a human brand boosts consumer perceptions of brand authenticity of the human brand and therefore increases consumers' purchase intentions.

Power distance is the extent to which people in a culture expect and accept social inequality (Hofstede 2001). It can also manifest at the individual level as a person's power distance belief (PDB) (Winterich and Zhang 2014). When consumers' PDB is low, they tend to believe that everyone should be equal, and nobody should be superior to others in all aspects; when consumers' PDB is high, they tend to accept social inequality and power as necessary for the society (Oyserman 2006). Therefore, we predict that a human brand's weakness can have a positive effect on authenticity perceptions only when consumers' PDB is low. On the other hand, high-PDB consumers expect a human brand to be superior in all aspects and are likely to infer unfavorable product attributes from the human brand's weakness.

The results of our two experiments supported our theorizing. Study 1 tested the main effect of revealing a human brand's weakness. We employed a single-factor (human brand: weakness vs. no weakness) between-subjects design. Participants in the weakness condition read that a CEO had great education and business backgrounds, while he was very poor at public speaking at conferences. Participants in the no weakness condition read a similar profile of the CEO, who also had great public speaking skills. Results showed that participants in the weakness condition perceived higher human brand authenticity than those in the no weakness condition ($F(1, 95) = 5.69$, $p = .019$). Participants in the weakness condition also indicated higher purchase intentions than those in the no weakness condition ($F(1, 95) = 4.59$, $p = .035$).

In Study 2, we used a 2 (human brand: weakness vs. no weakness) × 2 (PDB: high vs. low) between-subjects design to examine the moderating role of PDB and the mediating role of human brand authenticity. The overall procedure of Study 2 was similar to that of Study 1, except for several changes. First, we manipulated participants' PDB using a well-established procedure (Winterich and Zhang 2014). Second, we measured consumers' purchase intentions ($\alpha = .91$) and human brand authenticity ($\alpha = .92$) with multi-item scales (Moulard et al. 2015). Third, we measured social comparison orientation and self-esteem as control variables.

A two-way ANOVA showed that there is a significant interaction on perceived human brand authenticity ($F(1, 239) = 3.79$, $p = .053$). Planned contrasts showed that in the low PDB condition, a human brand with a weakness led to higher perceived human brand authenticity than one with no weakness ($t(239) = 4.01$, $p < .001$). In the high PDB condition, however, there is no difference in terms of perceived human brand authenticity between the weakness condition and no weakness condition ($t(239) = -1.24$, $p = .22$). There is also a significant interaction effect on purchase intentions ($F(1, 239) = 7.22$, $p = .01$). In the low PDB condition, a human brand with weakness led to a higher purchase intention than one with no weakness ($t(239) = 1.83$, $p = .069$), albeit marginally significant. In the high PDB condition, however, a human brand with weakness led to a lower purchase intention than one with no weakness ($t(239) = 1.96$, $p = .049$). To test mediation, we analyzed our data using a PROCESS macro (model 8, sample size = 5,000; Hayes 2013). The indirect effect of the interaction had a 95% bias-corrected confidence interval ranging from -.86 to -.01, excluding zero and thus supporting mediation. The results hold after controlling for social comparison orientation and self-esteem as confound variables.

This paper presents both theoretical and practical implications. Theoretically, this research contributes to the research of human brands and brand authenticity by examining the antecedents of human brand authenticity. We show that revealing a human brand's weakness enhances perceived authenticity and purchase intentions of the brand. Moreover, we identify PDB as a boundary condition of the effect, such that the positive effect of revealing a weakness only emerges when consumers' PDB is low. This research also offers practical suggestions for building and positioning human brands. Our findings suggest that showing weaknesses occasionally can enhance perceptions of human brand authenticity, particularly for cultures or markets with low power distance. In contrast, human brands in cultures and markets with high power distance may benefit more from an impeccable profile.

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Improving the Measurement of Aging in Consumer Behavior Research
– Lessons from Demography

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EXTENDED ABSTRACT

Recent contributions that review the influence of aging on consumer behavior discuss the usefulness of specific age dimensions other than chronological age for theory development. The motivation of this paper is to add to the ongoing debate by shedding light on measuring aging processes in consumer behavior. The intention of this approach is twofold: first, the paper aims to summarize how age-related changes were assessed. Second, the authors introduce a well-established concept from demography, the characteristic age approach (Ryder 1975), to the field of consumer behavior research, to facilitate and enrich research on the influence of specific aspects of the aging process.

Based on the methodology of Zniva and Weitzl (2016) the authors conducted a rigorous literature search using two databases and 21 keywords related to aging. 145 articles dealing with older consumers and published in quality peer-reviewed journals from 1980 to 2017 were selected. To analyze these studies a typical distinction made in social sciences and gerontology to classify age and aging (e.g. Birren and Cunningham 1985; Settersten and Mayer 1997) was used. According to this framework aging processes are usually grouped into: (1) biological aging, (2) psychological aging, and (3) social aging. Because of the strong interdependence between biological, psychological, and social aging a fourth category was added to describe (4) holistic approaches to the measurement of aging. Furthermore, for completeness sake, the authors included (5) chronological age. The five aspects of aging were used as a classification scheme for analysis. Independent variables of all 145 quantitative studies were screened for measures of aging processes or chronological age and afterwards categorized into the five categories.

As a first result, the usage of chronological age was assessed. Virtually all identified quantitative studies (144 out of 145) used chronological age to some extent. Biological age measures were used in 13% of the identified studies. Biological age measures can be divided into three subgroups: (1) measures assessing a self-reported generic health status, (2) measures of self-reported health-related activities, and (3) self-reported biological/health events. Measures of psychological age were applied in 21% of the analyzed articles and can be divided into two subgroups, namely measures of self-perceived age and measures of memory and cognition. Social age measures were applied in 8% of the identified articles. Studies typically measured (1) retirement status, (2) grandparenthood and (3) widowhood and household composition. Holistic measurement approaches were used by 7% of the identified articles. They can be divided into (1) studies evaluating the impact of life events on older consumer behavior and (2) studies using a mix of different approaches. Life events were typically measured using indices based on the self-reported experience of transitional events (e.g. from Chiriboga 1989). Other holistic measures combined a multitude of different aspects of aging. The majority of studies used the gerontographics approach (Moschis 1992). A more recently introduced holistic approach is the concept of old-age orientations (Mathur et al. 2017).

In summary, results of the review show that chronological age is still the most used measure. Alternative measures of aging differed widely within aging dimensions. Furthermore, a mix of self-developed measures and measures derived from previously extent literature could be observed. The most dominant measurement approach identified was a psychological approach. Studies measuring self-perceived age used predominantly so-called "cognitive age" developed by Barak and Schiffman (1981). Finally, alternative measures of aging in consumer behavior research were often of subjective nature (based on individual awareness or experience). Only two out of a 145 studies used objective measures to assess performance of cognitive aging.

Based on the results of the literature review the authors believe that a certain complexity and subjectivity of alternative measures of aging explain the substantial use of chronological age in consumer behavior research. The parsimony of the chronological age measure, which integrates all dimensions of aging into one number, commonly understood in everyday life, is a very strong argument irrespective of its weak explanatory power compared to alternative approaches. To integrate the catholicity of chronological age with more rigid, complex and objective aging measures, the authors propose a concept from demography, the so-called "characteristic ages" (Sanderson and Sherbov 2014). To illustrate the advantages of the characteristic age approach the authors present an empirical example. Using data from the 2016 wave of the Health and Retirement Study (National Institute on Aging 2007), characteristic-based ages across older adults (aged 50 years or older) in the United States are compared. Distinguishing two subgroups (e.g. those with high versus those with low out-of-home food consumption), the example highlights disparities in psychological and biological aging. Biological age was measured using the objective performance measure of hand grip strength. Psychological aging, in turn, was measured with an objective memory test. Findings show that older adults of the high out-of-home food consumption subgroup are significantly about 10 years younger cognitively than their counterparts with low out-of-home food consumption. Thus, men and women aged 70 years of the high out-of-home food consumption have the same psychological age as their counterparts from the low out-of-home consumption group aged only 60 years.

The interpretation of the results shows the advantages of the characteristic age approach. The approach converts relatively complex measures into a chronological age number eliminating the hassle of having to explain it any further. Furthermore, the approach facilitates the comparison of measures of aging across different subgroups and would also allow for the evaluation of the measurement properties of different subjective and objective age measures within different aging dimensions. Given the presented review and data, the authors hope to encourage more research using the characteristic age approach in consumer behavior research.

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Videography

Zakka: Uncategorized Culture of Uncategorized Goods, an Oral History of Uncategorized Man

Takeshi Matsui, Hitotsubashi University, Japan
Tokuro Oka, Freelance
Toru Yoshikawa, Freelance
Mikiko Uchida, Freelance

Intended Contribution to Knowledge

This videography conducts a case analysis of zakka category in Japan as a contribution to the development of a theory to explain the relationship between tastemaker and category emergence.

Literature Foundations

Durand and Khaire (2017) contrast "category emergence" and "category creation" based on whether the new category is formed from elements outside the existing category system, or from within. In category emergence, labeling follows material innovation. In the Consumer Culture Theory tradition, most of the previous research focuses on "category creation" with some exceptions (Giesler 2012). The paucity of research on "category emergence" calls for the theorization of its dynamic process. A new category emergence is a process of boundary spanning, which is practiced by entrepreneurial tastemakers (Scaraboto and Fischer 2013). As such, this videography asks what is the role of a tastemaker in category emergence.

Research Method

15-hour-long interviews with the key informants, Taro Hasegawa, the owner of the legendary zakka shop, Bunkaya-Zakkaten, operated in Tokyo from 1974 to 2015.

Findings and implications

Category emergence is not necessarily initiated by material innovation, contrary to the findings from the previous studies. Instead, a tastemaker's distinctive aesthetic sense can preexist the attributes and features redefined and reinterpreted. To develop the theory, we should elaborate on the theoretical framework to explain the relationship between material and mental repertoires that enable the construction of distinctive strategies of actions (Maciel and Wallendorf 2016).

The Fresh Professor: A Pedagogical Adaptation For the iGeneration

Mitchell Hamilton, Loyola Marymount University, USA
Julian K Saint Clair, Loyola Marymount University, USA

Intended Contribution to Knowledge

Since the inception of higher education, students have been important consumers of the primary product offered by colleges and universities (i.e., educational experiences). However, as the target market inherently transitions from one generational cohort to the next, the new generation of college students bring new challenges for the curators of higher learning. Consequently, professors need to periodically adapt their pedagogies to align with generational cohorts.

Currently, as the last wave of Millennials washes over our collegiate campuses, the metaphorical tide is bringing in a new breed of student: The iGeneration. The present study investigates a potential solution to the new challenges presented by these iGeneration consumers. This solution involves a "flipped classroom" approach to the business case study teaching method.

Literature Foundations

The present study sits at the intersection of generational marketing, higher education, and the adoption of innovation. More specifically, this paper seeks to better understand the way in which experiential learning and new technologies converge, within a flipped classroom setting, to target specific generations of college consumers.

Research Method

Forty-eight undergraduate marketing students experienced two conditions in a within-subjects, mixed-method design. The first condition was a "traditional" approach to the business case study teaching method. The second condition was a "flipped" approach that included a simulated classroom discussion presented in the form of a fully scripted sitcom parody (i.e., The Fresh Professor). Student engagement was measured during focus groups and learning objective outcomes were evaluated using a content analysis.

Findings and Implications

The findings suggest that the flipped classroom approach increases student engagement more than the traditional approach. Furthermore, the flipped approach had a stronger positive effect on learning objective outcomes. These findings help to better understand and satisfy the current consumers of higher education.

Understanding the Challenges to School Drop-out in a Low-income Community in South Africa

David James Schmidtke, Griffith University, Australia

Intended Contribution to Knowledge

In Khayelitsha, a community in Cape Town, South Africa, according to the last census, 70% of children are not completing their secondary education. A focused ethnography study is well suited to understanding complex issues such as school drop-out, due to the application of various methods of inquiry that produce detailed accounts, descriptions and interpretations of human lives. Formative research in social marketing is largely focused on self-reporting methods, such as surveys and focus groups, which present biases such as social desirability bias. This study will extend beyond self-reporting methods, through undertaking a focused ethnography study, that collects a mixture of written, audio and video data from interviews, participant observations and focus groups.

Literature Foundations

Due to the exacerbated inequalities observed across regions within developing countries, social change programs need to be focused at a community level as opposed to being state or nationally focused. This study adopts a Community Based Social Marketing (CBSM) approach. This approach argues that connections within the community offer the most effective way of facilitating behaviour change.

Research Method

A focused ethnography presents as the overarching research design framework employed in this study. Data was collected through interview, focus group and participant observation. At the end of the six months of field work, 45 interviews and focus groups were completed, 80 hours of video was collected and over 100 community members participated in the research. Co-member checks were completed study participants.

Findings and implications

A lack of role models and idleness children face after school were identified as root causes to dropping out of school. Developing a social marketing program around these root causes is recommended. In addition, further use of methodologies (such as focused ethnography) that do not rely solely on self-reporting data is recommended to understand complex issues in developing world communities.

Spot - Conquering the Public Space - Ethnography of a Spatial Practice: Downhill Longboarding

Thomas Stenger, University of Poitiers, France

Intended Contribution to Knowledge

The practice of downhill longboarding appears to be as spectacular... as it is exclusive. And for good reason: it "does not exist", according to the law. However, the Ministry of Sports recognizes longboarding. Practitioners may be licensed and insured in the event of accidents... despite the fact that the Highway Code does not recognize them. Longboarding is also a "soft mode of transport" which does not generate pollution or greenhouse gases. Soft mobility is encouraged by the European Union. Faced with this paradoxical situation, longboarders must invent both the practice and the space to practice in. Longboarding is thus an original case, which makes it possible to question the consumption and appropriation of public space.

Literature Foundations

Returning to Henri Lefebvre's founding works (1974/1991) and his "unitary theory of space" around the triad "conceived space - perceived space – lived space", we propose to describe and understand the original process of appropriation, consumption and production of the public space, typical of downhill longboarding.

Research Method

We spent two years carrying out an ethnographic and videographic study with a group of longboarders from New Aquitaine (France), to study this issue. With them, we learned to longboard, while observing and participating in the evolution of this small tribe that explored and discovered space and organized itself to have appropriate spaces. Participation in national events in Normandy, Brittany, the Alps and the Pyrenees has also given us a better understanding of the spatial issues and culture of the downhill longboard community

Findings and implications

This ethnography highlights the importance of "trial by space" and the interest of Lefebvre's work for consumption's study, in line with recent works. Two forms of appropriation and associated spatial practices are also highlighted, while underlining the marketing and political motivations for the public space appropriation. It also mobilizes and contributes to work that shows how to make place, and appropriate and consume places within the public space.

Faces of Fear: Consumer Empowerment Through Active Escapism

Jacob Lee Hiler, Ohio University, USA
Elana Harnish, Ohio University, USA

A study conducted using a video and textual netnographic approach. Over 100 hours of video data was observed on YouTube and Twitch and approximately 80 pages of textual data was observed through reddit and other forums. This data was then analyzed using a hermeneutic and phenomenological approach. Utilizing consumer culture theory, this film examines the consumptive experience of survival horror games through viewing it as a form of active escapism. Specifically, the film explores why individuals put themselves through the psychological torment of playing these games, and examines their consumer journey through the transformative consumer identity process of escape, adaptation, and emergence.

Inclusion by Division: When Boundaries Turn no Man's Land Into Some Man's Land

Renato Regis, Vienna University of Economics and Business, Austria
Bernadette Kamleitner, Vienna University of Economics and Business, Austria
Monika Koller, Vienna University of Economics and Business, Austria
Carina Melanie Thuerridl, University of Amsterdam, The Netherlands

Intended Contribution to Knowledge: People constantly encounter visible boundaries. i.e. divisions in space. For example, they see fences surrounding houses, visually delimited car lanes, sidewalks, seats, desks and product displays. To date, research has focused on effects of such boundaries on individuals. Boundaries, however, are inherently related to social life, as they help define where one's space ends and another's begin. This videography highlights how the presence of a boundary may serve to include rather than exclude others, i.e. how it can attenuate consequences of territorial behavior.

Forum Summaries

Forum
Toward an Integrated Wisdom of Goals and Personal Resources
Jordan Etkin, Duke University, USA
Sarah A. Memmi, Duke University, USA
Ravi Dhar, Yale University, USA
Ayelet Fishbach, University of Chicago, USA
Gavan Fitzsimons, Duke University, USA
Christopher Hsee, University of Chicago, USA
John Lynch, University of Colorado, USA
Cassie Mogilner, University of California Los Angeles, USA
Nicole Mead, University of Melbourne, Australia
Stephen A Spiller, University of California Los Angeles, USA

Goals and personal resources (e.g. time money energy etc.) are fundamentally interdependent but limited research to-date has explicitly leveraged knowledge of one to understand the other. This forum brings together experts in each field to share accumulated wisdom foster collaboration and map out a mutual agenda for future research.

Forum
The Dark Side of Automation in Marketing and Consumption
Klaus Wertenbroch, INSEAD, Singapore
Stefano Puntoni, Erasmus University Rotterdam, The Netherlands

This roundtable will engage ACR members in a discussion of the dark side of automation in marketing and consumer behavior. We will discuss the possible roles of technology in fostering a number of undesirable consumer outcomes including welfare loss rising inequality loss of privacy and additive behaviors.

Working Papers

4B Smiley Food Brand Logos: The Impact of Smiley Faces in Food Brand Logos on Food Healthfulness and Price Perception

Annika Abell, University of South Florida, USA
Dipayan Biswas, University of South Florida, USA

The findings of two studies show that food brands and menus associated with logos that include smileys are perceived as lower in healthfulness and price. Further consuming foods from restaurants with smiley face logos in their brand name or in their menu leads to higher perceived guilt.

10J Raising Kids the Right Way? The Interplay of Taste and Morality in Parents' Identity Projects For their Children

Aya Aboelenien, Concordia University, Canada
Zeynep Arsel, Concordia University, Canada

This paper investigates the interplay between morality and taste in kids' socialization. Through interviews with immigrant families in Canada we discuss how parents envision their kids' identity projects and how they shape their habitus with relevant capital. We show how inter-generational transfer of taste practices serve to produce moral citizens.

1J When the Bigger is Not the Better: Backlash Effects of Before-and-After Advertising

Hamed Aghakhani, Dalhousie University, Canada
Pingping Qiu, Monash University, Australia
Kelley Main, University of Manitoba, Canada
Fang Wan, University of Manitoba, Canada

This research explores the impact of the discrepancy shown in before and after weight loss appeals. We show that a large discrepancy can have negative effects on attitudes towards the advertised product due to lowered safety perceptions. Further this backlash effect is more likely among high power consumers.

19I Desire and Contemporary City: A Study on Urban Space Consumption Behavior of Millennial Generation

Suhyoung Ahn, Yonsei University, South Korea
Ae-Ran Koh, Yonsei University, South Korea

The aim of this study is to investigate Benjamin's concept of "flâneur" as a method of exploring urban space consumption behavior from a contemporary point of view and to examine urban spaces from a new perspective as places of production that are facilitated by desire.

5M Exploring the Wisdom of Brand Comfort: An Investigation of Comfort Foods and Comfort Brands

Kirk Damon Aiken, California State University, Chico, USA
Matthew Meuter, California State University, Chico, USA
Ajay Sukhdial, Oklahoma State University, USA
Phoebe Jones, California State University, Chico, USA

Results of two nationwide studies reveal that comfort food is quite regularly consumed and for numerous reasons besides emotional support. Moreover non-food comfort brands are similarly sought after by consumers. Thus it appears that consumers desire "brand comfort" an intriguing and important behavioral notion that extends far beyond food choices.

2E Tradition Brand Concepts and Social Media: A Brand Dilution View

Gunben Ceren Aksu, Rutgers University, USA
Alokparna (Sonia) Monga, Rutgers University, USA
Carlos Torelli, University of Illinois at Urbana-Champaign, USA

In three studies we find that when a brand with a tradition concept engages in social media activities consumers experience conflict which leads to brand dilution. This effect can be mitigated when social media facilitates collectivity (versus individuality).

4A Do You Think Products With Complex Designs Are More Luxurious? The Role of Self Construal Moderates the Effect of Visual Complexity on Luxury Perception

Nakaya K akuda, City University of Hong Kong, China
Cheng Gao, Nanjing University, China

We propose that visual complexity of product design and display increases consumer luxury perception. The results confirm the effect of visual complexity on luxury perception through perceived complexity. We argue that this effect can be attenuated by priming self-construal explaining cultural and individual difference in luxury perception.

9I Revisiting Voluntary Disposition Through Consumer Journeys

Pia Annette Albinsson, Appalachian State University, USA
B. Yasanthi Perera, Brock University, Canada
Lubna Nafees, Appalachian State University, USA

We examine consumers' disposition journeys. A netnography of consumer narratives from Facebook groups advocating minimalism reveal the barriers facing consumer's decluttering efforts. Consumers experience despair as well as action paralysis when failing to declutter. Conversely those who are successful in their efforts experience elation and appreciate their more streamlined lives.

12I Consumer Reactions to Brand Deletion: The Role of Psychological Reactance in Social Media Activism

Fadi Almazyad, Worcester Polytechnic Institute, USA
Purvi Shah, Worcester Polytechnic Institute, USA
Eleanor Loiacono, Worcester Polytechnic Institute, USA

When a popular brand is discontinued from the market companies may experience psychological reactance from consumers who then participate in social media activism to bring the brand back. The goal of this research is to explicate this interesting phenomenon through qualitative analysis of one such successful social media activism campaign.

13K Feeling at Ease in Adoption of Learning Technologies: Drivers and Mediator

Alonzo Altamirano, California State University Monterey Bay, USA
Jenny Lin, California State University Monterey Bay, USA
Angeline Nariswari, California State University, Monterey Bay, USA

In two studies we investigate consumer adoption of learning technology VoiceThread. The role of feelings of at-ease was found to drive perceptions towards VoiceThread. Extraversion was identified to drive feelings of at-ease and perceived importance was found to mediate the relationship between feeling low at-ease and intention to adopt Voicethread.

11F The Roles of Power Display and
Transgression Relevance on Responses to Brand Failures

Lam An, University of Central Florida, USA
Ze Wang, University of Central Florida, USA

This research investigates why and how one predominant cue in communication the spokesperson's expression of power will affect consumer responses to brand failure. It also looks into how the relevance of the brand failure to an individual influences this effect as well as its underlying mechanism.

12P Fear and Mourning in Identity Transformation:
The Negotiation of Consumption and Disposal Using Social-Media

Kelley Cours Anderson, Texas Tech University, USA
Kevin A. Harmon, Texas Tech University, USA

We explore how social-media facilitates consumers' identity transformation. We study this phenomenon within the subculture of minimalism using a netnographic approach. Emerging themes reveal communal support offered by social-media during consumers' transformation: from fear to mourning to status and negotiating the tensions of shifting consumption habits.

4I Perceptions of Required Care and Caregiving Goals
Moderate Sustained Attention to Cuteness

Oriana Rachel Aragón, Clemson University, USA

This research challenges the conventional wisdom that the incorporation of cute beings in product messaging increases general appeal and enhances consumers' product engagement. We show how framing messages (babies are robust or fragile) interact with parenting motivations to change consumers' engagement with babies and subsequent engagement with baby-related products.

3K Soul Inside the Machine: Product Morphology Influences
Perception of Immaterial Qualities and Consumer Valuation

Sumitra Auschaitrakul, University of the Thai Chamber of Commerce, Thailand
Dan King, University of Texas Rio Grande Valley, USA
Ashesh Mukherjee, McGill University, Canada

When is an object valued for its physical materials and functionality and when is an object valued for its immaterial qualities? We use an object morphology framework to show that non-intuitive physical features of an object can elicit perceptions of immaterial qualities and increase valuation for the object.

15H Breaking Away From Inferiority;
The Strive For Legitimacy in Post-Colonial Service Encounters

Evelyn Azikiwe, Sheffield Hallam University, UK
Craig Hirst, Sheffield Hallam University, UK

This study reveals how inequalities in power structures related to post-colonial context in Nigeria manifests in service-based settings. Building on work by Ustunier & Thompson (2012) it aims to demonstrate the ways in which the experiences and identities of service workers are rendered and transformed through marketplace interactions.

14J When Humanization Backfires:
Consumer Preference for Algorithmic Product Curation

Jessica Babin, University of Georgia, USA
Rosanna Smith, University of Georgia, USA
John Hulland, University of Georgia, USA

Though algorithms drive much of the decision-making behind curation services firms often fear that consumers will react negatively to this knowledge. However we find that consumers exhibit a preference for algorithmic over human curators due to the belief that algorithms are better able to make complex decisions.

14O Are You Siri-ous? The Effect of Humor
on the Future of AI Agents in Consumer Service

Marat Bakpayev, University of Minnesota Duluth, USA
Ann Kronrod, University of Massachusetts Lowell, USA

People dislike robots that look too similar to humans. This work investigates consumer reactions to linguistic similarity of Artificial Intelligence customer service agents to humans. Employing Conversation Theory we first aim to define and quantify linguistic similarity and then test its effect on consumers interacting with Artificial Intelligence agents.

17M Mental Accounting of Past vs Present Costs

Akshina Banerjee, University of Chicago, USA
Oleg Urminsky, University of Chicago, USA
Abigail Sussman, University of Chicago, USA

We revisit the Lost Ticket scenarios for a past loss. Though purchasing patterns for both past and present losses were the same double-counting explained the effect in the past but frustration did so in the present. This research demonstrates that emotional factors underlie findings previously only attributed to mental accounting.

14e Brave New World:
Foreseeing the Consumer Choices by Using Deep Neural Networks

Marija Banovic, Aarhus University, Denmark

In this research we have benchmarked the performance of deep neural networks for the consumer choice identification problem using a small dataset. Our results show that even on the small data samples consumer choices can be predicted with high accuracy.

17O Predicting Experiential (vs. Monetary) Risk Preferences from Consumers' Memory:
A Behavioral and Neuroimaging Experiment

Chinmai Basavaraj, University of Arizona, USA
Martin Reimann, University of Arizona, USA
Kobus Barnard, University of Arizona, USA
Michael Norton, Harvard Business School, USA

This experiment shows that risk preferences for everyday consumption experiences (vs. those for money) can be predicted based on neuroimaging data. We apply recent advances in deep learning to model the neurophysiological representations associated with experiential choices showing that deep learning predicts choice more accurately than traditional machine-learning methods.

13D In a Serious Relationship With My Streaming:
The Case Study of the Humanized Netflix Interaction on Facebook

Juliana M. Batista, EAESP-FGV, Brazil
Delane Botelho, EAESP-FGV, Brazil

Through the case of the humanized Netflix interaction on social media this study aims to explore on the field how can brands stimulate anthropomorphism to increase consumers' perception of congruity with a brand in order to improve their consumer-brand relationship.

17C Running Risks in Someone Else's Shoes:
A Meta-Analysis on Self-Others Discrepancies in Risky Decisions

Alex Belli, Australian Catholic University, Australia

Are consumers more risk-seeking for decisions affecting others or themselves? To answer this question a meta-analysis was conducted on 182 effect sizes. While decision-makers are less risk-seeking for others in loss-framed conditions uncertainty-avoidant cultures and for distant others they are more risk-seeking when themselves or one other person are affected.

4G Effectiveness of Labels: The Interaction Effect of Labels' Color Scheme
and Individual Differences in 'Lay Rationalism' on Preferences For Green Electricity

Paul Bengart, Otto-von-Guericke Universität Magdeburg, Germany
Bodo Vogt, Otto-von-Guericke University Magdeburg Germany

Nudges are intended to support people in making more rational decisions. This research shows that the susceptibility to nudges via traffic light labels (vs. grayscale labels) is negatively related to the individuals' "lay rationalism" which describes a tendency to rely on reason (vs. feelings) when making decisions.

19H It Must be Luck! The Impact of Superstitious Events on Memory

Kara Bentley, Chapman University, USA
Priyali Rajagopal, University of North Texas, USA
Katina Kulow, University of Louisville, USA

This research investigates the impact of superstitious agents during an experience on memory for that experience. We argue that the perceived influence of superstitious agents such as luck during an experience can increase understanding of the experience itself weakening memories and decreasing evaluations of the experience and any associated brands.

13A Binge Watchers, Media Marathoners,
and the Consumption of Multi-Episode Media Content

Amita Bhadauria, Bradley University, USA
James A Muncy, Bradley University, USA
Rajesh Iyer, Bradley University, USA

The current project explores the differences between those who plan their multi-episode video consumption sittings ("media marathoners") and those who do not ("binge watchers"). We find that this distinction reveals important differences which impact the antecedents of consequences from enjoyment of participation in and affect towards multi-episode media consumption.

19M How Mortality Salience Affects Preference
for Hedonic, Functional, and Eudaimonic Experiences

Gunes Biliciler-Unal, University of Texas at Austin, USA
Raj Raghunathan, University of Texas at Austin, USA
Adrian Ward, University of Texas at Austin, USA

This research shows that mortality salience (vs. not) heightens consumers' interest in functional experiences—hanging out with people who engage in functional activities and spending more time on functional tours—but not hedonic or eudaimonic ones. This effect is stronger for people who are low in pre-intervention productivity orientation.

5G Wise Consumers Use Mobile Apps to Choose Healthy Food Products

Mia M. Birau, SKEMA Business School, France

Generally little is known about the concept of wisdom in consumer behavior. This qualitative research is exploring the concept of "wisdom" when using a mobile app to make healthy food decisions.

8L The Effect of Product Conspicuousness and Social Risk on Negative Emotions:
The Ethical Dilemma of Consuming Counterfeits

Delane Botelho, EAESP-FGV, Brazil
Camila Zancanella, EAESP-FGV, Brazil
Ramona De Luca, EAESP-FGV, Brazil

The growth of counterfeiting has several moral and ethical implications for individuals and society. This article explores the negative emotions consequent to the decision of consuming counterfeits. In particular we address that product conspicuousness and the perception of social risk induce consumer's shame for deciding consuming counterfeit products.

18F Simple Complexity: An Examination of Quantitative and Qualitative FOP Formats

Monique Breaz, University of Goettingen, Germany
Steffen Jahn, University of Goettingen, Germany
Yasemin Boztug, University of Goettingen, Germany

Qualitative front-of-pack labels can lead to erroneous product healthfulness assumptions. Our studies indicate that not only are quantitative formats consistently more precise than qualitative they are just as easily understood. Our hybrid label combines the two formats in a redundant manner compounding their individual advantages and anchoring their deficiencies.

12N A Meta-Analysis of the Impact of Social Tie Strength Word-of-Mouth
Communications on Information Exchange and Purchasing Related 'Outcomes'

Eleanor Bruce, University of Technology Sydney, Australia
Francois Carrillat, University of Technology Sydney, Australia
Adrian Camilleri, University of Technology Sydney, Australia

A meta-analysis that examines the potential theoretical and methodological variables that moderate the level of influence that word-of-mouth from strong or weak ties has on information exchange and purchasing related outcomes.

5A Cute Outside, Sweet Inside:
The Effects of Cute Food Packaging on Expectations About and Experience of Sweetness

Raphaela Elisabeth Bruckdorfer, University of Duisburg-Essen, Germany
Oliver B. Büttner, University of Duisburg-Essen, Germany

In two studies we examine the effects of cute packaging on sensory assumptions about and experiences of food products. We show that products with cute (vs. neutral) packaging are (a) assumed to taste sweeter and (b) actually experienced as tasting sweeter providing new information for marketers and (health-)conscious consumers.

14D OK Google, I'll Take it From Here:
The Influence of Artificial Intelligence on Consumer Information Search

Bryan Buechner, University of Cincinnati, USA
Daniel M Grossman, University of Cincinnati, USA
Joshua J. Clarkson, University of Cincinnati, USA

Two experiments demonstrate that AI (versus human) recommendations are more likely to elicit greater doubt and subsequently heighten the desire for additional information and second opinions. This effect is linked to consumers' desire to understand the basis of AI's recommendations and is independent of source perceptions (e.g. expertise credibility collaboration).

16H The Downside of Self-Control Success

Bryan Buechner, University of Cincinnati, USA
Joshua J. Clarkson, University of Cincinnati, USA
Ashley Otto, Baylor University, USA

Using political psychology research as a lens three studies demonstrate that political conservatives' documented success at inhibitory processes comes at the expense of their ability to engage in updating processes. These findings demonstrate that the processes which facilitate self-control success can undermine consumers' ability to promptly adapt to new demands.

1B. I Can Find it Myself: Advertisement Disclosure
in Persuasion Attempts Cause a Threat to Competence

Stephan Carney, Carnegie Mellon University, USA
Laurence Ashworth, Queens University, Canada

Online search is likely one of the first places consumers look for product information. This research examines whether the mere act of disclosing search content as an "ad" causes consumers to avoid it entirely and investigates whether this disclosure causes a threat to one's self-perceived competence.

15A The Genealogy of Pantswear:
A Longitudinal Expression of Feminine Empowerment

Lena Cavusoglu, Portland State University, USA
Charla Mathwick, Portland State University, USA

Pantswear has an extraordinarily controversial history that has evolved from social stigmatization to acceptance and back throughout the past century. This study aims to illustrate the lineage of pantswear and its use as a symbolic meaning or as a mechanism to construct identity alongside growing feminine empowerment in American culture.

6H Social Exclusion Enhance Self-Improvement Consumption?
It Depends on Domain Differences and Implicit Self-Theories

Chia-Han Chang, National Sun Yat-Sen University, Taiwan
Chun-Tuan Chang, National Sun Yat-sen University, Taiwan

We examine whether social exclusion enhances subsequent self-improvement consumption. The results from three experiments suggest that being rejected or ignored lead to across-domain or within-domain self-improvement consumption differently. Individual differences in implicit self-theories (entity vs. incremental theorists) are found to enhance the effects above.

2D Consumers' Responses to Brand Failure:
The Role of Material vs. Experiential Brands

Sylvia Chang, University of Washington, USA
Shailendra Pratap Jain, University of Washington, USA

Current research contributes to the brand literature by examining a novel antecedent influencing brand evaluation after brand failure: whether the brand is perceived to be material or experiential. Results from two experiments indicate that consumers punish material (vs. experiential) brands less and investigate when and why this effect occurs.

8G Surprise, Regulatory Focus, and Their Role in Reversing Loss Aversion

Subimal Chatterjee, SUNY Binghamton, USA
Shabnam Nazari, SUNY Binghamton, USA
Sirajul Arefin Shibly, SUNY Binghamton, USA
Timothy Heath, University of South Florida

We show that prevention-focused consumers are less surprised by losses (losing money) than equivalent gains (finding money) when the amounts involved are non-trivial suggesting that surprise may contribute to the observed reversal of loss aversion by amplifying more the pleasure of the gain relative to the pain of the loss.

12M Friendship Matter: How Inter-Senders Friendship Shapes
Influences Information Receivers' Information Consumption

Yu-Jen Chen, Lingnan University
Amna Kirmani, University of Maryland, USA

We propose a novel perspective to investigate how friendship structure influences a consumer's decision to consume the information. In the context of multiple information senders the relationship among senders serve as a cue for perceived independency of the source which subsequently influences how they consume the information.

2L Rearticulating an Old Brand or Selling Its Past?
The Effects and Boundary Conditions of Brand Revitalization and Retrobranding

Pei-Chi Chen, National Sun Yat-sen University, Taiwan
Hsuan-Yi Chou, National Sun Yat-sen University, Taiwan
Cony M Ho, University of Cincinnati, USA

This paper explores how consumer attitudes are affected by two different strategies taken by historical brands: brand revitalization and retrobranding. We find that when the brand is considered to be exciting or consumer materialism is high a brand revitalization strategy is more successful than retrobranding in terms of advertising effectiveness.

3B The Shape of Loneliness:
Loneliness and Preference For Angular Versus Circular Logo and Product Shapes

Nuoya Chen, Fudan University, China
Jinfeng Jiao, SUNY Binghamton, USA
Xiucheng Fan, Fudan University, China

We examine the relationship between loneliness and various shapes elements featuring angularity or circularity (logo typefaces app icons and product appearances). With data from the US and China in four studies we find that lonely people prefer angular product or logo shapes to circular ones but only in private consumption.

11P A Picture is Not Worth a Thousand Words and More is Not Always Better:
Numeral Communication Through Texts, Pictures and Their Combination

Nuoya Chen, Fudan University, China
Jinfeng Jiao, SUNY Binghamton, USA
Xiucheng Fan, Fudan University, China

Our results show the numeral picture does not work better than the numeral text. Additionally the numeral picture works only when the numeral text is not present and vice versa. The combination of the numeral text and picture does not work better than the text-only or the picture-only numeral communication.

16P Belief in Karma Moderates the Effect of Mortality Salience on Indulgent Consumption

Siyun Chen, Jinan University, China
Haiying Wei, Jinan University, China

This research contributes to the marketing literature by proposing a framework wherein the activation of belief in karma subtly induces long-term perspective and subsequently lower preferences for indulgent consumption after mortality salience. We also complement the wealth of research that examines how self-benefit and other-benefit appeals can influence consumer behavior.

9E Knowing Your Name Makes Me a Better Man: The Positive Effect
of Helper Name Disclosure on Help Recipient's Prosocial Behavior

Yunqing Chen, Chinese University of Hong Kong, China
Leilei Gao, Chinese University of Hong Kong, China

People often receive anonymous help. Four studies showed that compared to receiving an anonymous help merely disclosing the name of the helper will increase the help recipient's likelihood of engaging in prosocial behaviors.

9K The Effects of Moral Appeal and Social Perception
on Effectiveness in Generating Charitable Support

Siyun Chen, Jinan University, China
Haiying Wei, Jinan University, China

We extend the previous literature on matching effects in persuasion. We also contribute to the donation literature by identifying new consequences of a match between moral appeal and fundraiser's characteristic and by documenting the mediating role of self-efficacy and response efficacy in driving the effects of a match on persuasion.

14C To Err is Human: Tolerate Humans Instead of Machines in Service Failure

Nuoya Chen, Fudan University, China
Smaraki Mohanty, SUNY Binghamton, USA
Jinfeng Jiao, SUNY Binghamton, USA

Automation has become popular in service industry. However compared to the service failure by humans consumers have more dissatisfaction for the service failure by machines. They are more likely to switch to another business with human employees. This is because they get angrier with the machine's mistake.

4E Vintage Appreciated by Average Consumers: Authenticity, and Symbolism

Tianqi Chen, Boston University, USA
Remi Trudel, Boston University, USA

Given the substantial market for vintage we investigate consumers' appreciation of vintage goods and the underlying mechanism. Vintage goods compared to new ones are perceived as more original and unconventional allowing consumers to convey an authentic self-image. Consumers attach more symbolic value and hold more positive attitudes towards vintage products.

16K The Interplay of Social Crowding and Self-Construal in Unethical Behavior

Yunjia Chi, Huazhong Agricultural University, China
Fue Zeng, Wuhan University, China
Wenli Zou, The Chinese University of Hong Kong Shenzhen, China

Based on self-construal theory we propose that social crowding triggers the unethical behavior of independent consumers though the perception of being threatened whereas it restrains the unethical behavior of interdependent consumers through the perception of being watched.

15C Date Night or Diamond? Examining Preferences for Romantic Gifts Across Cultures

Sydney Chinchanachokchai, University of Akron, USA
Theeranuch Pusaksrikit, Chulalongkorn University, Thailand
Cele Otnes, University of Illinois at Urbana-Champaign, USA

This research aims to examine the recipient's preference of gift type (experiential vs. material) in a cross-cultural context. Employing two experimental studies the results show the underlying mechanisms that explain the recipient's preference for each type of gift.

2G When Brands Repost User-Generated Content do Consumers Feel Threatened?

John P. Costello, Ohio State University, USA
Daniel M. Zane, University of Miami, USA
Rebecca Walker Reczek, Ohio State University, USA

Brands increasingly use user-generated content on social media (e.g. sharing a customer's post). In two studies we show that an unintended consequence of sharing user-generated content is that these posts (compared to the same content shown in an advertisement) results in negative social comparisons by consumers and decreased brand preference.

5C How Color Affects Food Choices: The Impact of Image Color on Consumer Preference of Vice Versus Virtue Foods

Yuanyuan (Gina) Cui, Auckland University of Technology, New Zealand
Jungkeun Kim, Auckland University of Technology, New Zealand
Jooyoung Park, Peking University, China

In five studies we illuminate that how the color of food images shifts people's food choices and demonstrate that the black-and-white thinking underlies the effect of the color (colorful vs. black-and-white) on the food choice between vices and virtues. We also rule out construal levels as an alternative explanation.

13E Ownership Feelings Towards Hedonic Digital Services? Investigating Psychological Ownership in Video Streaming Consumption

Sebastian Danckwerts, Heinrich-Heine-University, Germany
Maximilian Hartmann, Heinrich-Heine-University Düsseldorf, Germany
Peter Kenning, Heinrich-Heine-University, Germany

This research work investigates consumers' feelings of ownership towards video streaming services. Grounded in the theory of psychological ownership preliminary results show that investment of self and control of the object are positively related to psychological ownership towards the service which in turn positively influences consumers' service loyalty.

12K Finding Wisdom in the Consumer Crowd – Exploring Online Comments
Via Content Analysis and Automated Classification
Using Deep Neural Networks For Semantic Similarity

Hannah Danner, Technical University of Munich, Germany
Gerhard Hagerer, Technical University of Munich, Germany
Florian Kasischke, Technical University of Munich, Germany
Georg Groh, Technical University of Munich, Germany

We conduct a content analysis of online consumer comments on organic food and reproduce its results with automated text analysis based on a deep pre-trained neural network model for semantic similarity. We find that small-scale consumer research can inform zero-shot machine learning algorithms to analyze opinions in larger datasets.

9A Charity Donation at Point of Sales - Do Good While Shopping!

Neel Das, Appalachian State University, USA
Lubna Nafees, Appalachian State University, USA
Unal O. Boya, Appalachian State University, USA
Anindita Das, Appalachian State University, USA

In 2016 over $441 million was raised through checkout charity (Engage for Good 2017). Although the above-mentioned marketplace polls provide compelling evidence of consumer participation the actual phenomenon is likely not as straightforward. This research attempts to provide a stepping stone towards conceptualizing and building a comprehensive checkout charity perspective.

8J Avoiding the Crowds or Embracing the Wisdom of Crowds:
The Contrasting Effect of Public Versus Private Embarrassment on Conformity

Gopal Das, Indian Institute of Management Bangalore, India
Xun (Irene) Huang, Nanyang Technological University, Singapore

This research examines how incidental embarrassment may influence consumer preference for conformity. Specifically consumers who feel embarrassed in a public setting are less likely to conform to the crowd while those who feel embarrassed in a private setting expressed a greater tendency to conform to the wisdom of crowds.

2A Digital Transformation of Marketing Mix: From 4Ps to 4Ss

Melike Demirbag-Kaplan, HWTK (Internationale Hochschule für Wirtschaft, Technik und Kultur) Berlin, Germany
Lena Cavusoglu, Portland State University, USA

The digitalization agenda of recent years underlines the need for a transformation in the marketing mix to meet revolutionary changes in consumer decision journey and expectations. In this vein this study-in-progress proposes a new marketing mix model using the lens of digital transformation and its impact on the market actors.

5I What's for Dinner? The Effect of Planning on Consumers' Happiness
With What They Have For Dinner

Rodrigo S. Dias, Duke University, USA
Gavan Fitzsimons, Duke University, USA

We investigate how planning affects consumers' happiness with what they have for dinner. We find that consumers who plan what to have for dinner are happier with it. This occurs because those who plan anticipate their dinner more and find it easy to decide what to have for dinner.

7N American Conservatives: Anti-Globalist Global Brand Consumers

Claudiu Dimofte, San Diego State, USA

The anti-globalization and protectionist attitudes of the current U.S. administration and its supporters are unambiguous. This research finds that these views are actually both malleable and reversible if specific self-serving motivations are present. Priming conservative consumers' status concerns leads to their strong preference for global brands (particularly foreign-based).

14A Robot or Human?
The Effect of Robot-Versus-Human Caused Service Failure on Company Evaluation

Isabel Ding, National University of Singapore, Singapore
Miaolei Jia, University of Warwick, UK

The use of service robots is becoming increasingly popular but is it always good for a company? Three studies demonstrate that when a service failure is caused by a robot (vs. a human employee) customers evaluate the company more negatively. This effect is driven by the different levels of accountability.

17J Go With The Flow: Framing Gains as Flows vs. Stocks Increases Anticipated Spending

David Dolifka, University of California Los Angeles, USA
Stephen A Spiller, University of California Los Angeles, USA

Financial changes may be presented as either stocks or flows. We show that consumers rely upon this presentation format when evaluating their personal finances. When changes in long-term accounts are framed as flows consumers are more likely to squander gains by focusing on the change rather than the level.

5S Easy Eating: Reducing Food Waste With Convenience Food

Marit Drijfhout, University of Groningen, The Netherlands
Jenny van Doorn, University of Groningen, The Netherlands
Koert van Ittersum, University of Groningen, The Netherlands

Western households waste 25% of their purchased food which may be attributed to the temporal distance between the planned and actual moment of consumption. Building on construal level theory we propose that convenience food may reduce food waste by increasing the feasibility of meal preparation at the moment of consumption.

5J Social Facilitation of Eating: Does Together Mean More?

Chris Dubelaar, Deakin University, Australia
Prakash Satyavageeswaran, Indian Institute of Management Udaipur, Inda
Natalina Zlatevska, University of Technology Sydney, Australia
Alex Belli, Australian Catholic University, Australia
Ali Tamaddoni Jahromi, Deakin University, Australia
Thomas Gaarenstroom, Deakin University, Australia

Literature on social facilitation shows that eating together leads to increased food consumption. Our meta-analysis finds significant positive correlation between number of people at the table and amount of food consumed moderated by age and BMI. We also however find that when meal occasion is included the effect disappears.

11O Approach Aversion in Marketing Contexts

Yves Dupuis, Concordia University, Canada

Approaching stimuli are evaluated more negatively than static or receding ones. Could such a simple and preconscious effect impact perceptions of marketing messages? This work presents evidence that it does that the effect extends to purchase intent and that commercial advertisements suffer from this effect more than charitable appeals do.

11D The Comfortable Cohabitation of Awareness and Automaticity

Yves Dupuis, Concordia University, Canada

A conceptual topology of mental processes is proposed to assist researchers in determining expectations of the relative impacts of awareness and automaticity in specific contexts. The topology has two dimensions: the novelty and/or variability of the inputs to a mental process and the range of potential behaviors it can produce.

5K No Diet, no Problem: Social Judgments of Others' Self-Control Outcomes

Geoffrey Durso, Vanderbilt University, USA
Kelly Haws, Vanderbilt University, USA

How do consumers perceive others' indulgent behaviors that contradict others' longer-term goals? Two studies show that consumers judge indulgence as less surprising and more positively when these indulgences are irrelevant to the goal or when a situational attribution can explain the behavior. In short not all indulgences are judged equally.

1F Preferences For Ambivalent Products as a Function of "Too Good to be True" Beliefs

Geoffrey Durso, Vanderbilt University, USA
Robert Smith, Ohio State University, USA

Despite most products requiring explicit tradeoffs consumers feel ambivalent when products perform well on one dimension but poorly on another. We show that relative experts (the most profitable and influential customers) best understand such tradeoffs and thus deem seemingly perfectly positive products as "too good to be true."

7A I Will Not Retaliate if You Did Not Know the Risks: Investigating Consumer Responses to Firm Product Failures

Chaumanix Dutton, University of Southern California, USA
Norbert Schwarz, University of Southern California, USA

This research investigates consumer responses to product failures. In two studies we find that having a prior relationship with a firm makes a person less likely to retaliate against the firm. Attributing the awareness of risk of product failure to the firm predicts consumer retaliatory acts against the firm.

15F Learning From Your Mistakes: Can Elderly Consumers Outperform Younger Consumers in Unfamiliar Product Contexts?

Eric Eisenstein, Temple University, USA
Maureen Morrin, Temple University, USA
Ayalla A Ruvio, Michigan State University, USA
Ning Ye, Temple University, USA
Ashley Masterson, Independence Blue Cross

In this research we investigate the effects of age on experiential learning in a simulated market. We find that although older consumers initially exhibit decreased performance that is consistent with popular conceptions of elderly cognitive decline eventually they outperform their younger counterparts.

19Q Wisdom of Visual Metaphors in a Transmodern Marketplace Context

Esi Elliot, Midwestern State University, USA
Carmina Cavasoz, University of Hartford, USA

Our study highlights transmodern perspectives in selected visual metaphors of one artist Albert Cavazos to present a theory of marketing wisdom. Whereas the meanings conveyed by visual metaphors have been conveyed through an analysis of deep metaphors we discuss the meanings of the deep metaphors presented through transmodern perspectives.

10K The Role of Firm's Commitment to the Environment in Green Advertising For the Sustainable Markets

Hyo Jin Eom, Korea University, South Korea
Nara Youn, Hongik University, South Korea
DongJae (Jay) Lim, University of Georgia, USA

Two studies found positive effect of the firm's own commitment to the environment on the ad attitudes and purchase intention for the featured green product and green trust as a mediator. Further firm's eco-friendly effort generated more favorable outcomes for luxury products compared to those for mass products

6F When Your Well-Being is in Your Hands: The Role of Coping For Visually Impaired Consumers

Claudia Falchetti, ESPM, Brazil
Mateus Canniatti Ponchio, ESPM, Brazil

This study evaluates the relationships between coping vulnerability and well-being for visually impaired consumers. A mediating model is proposed and tested based on a sample of 113 individuals. The results revealed evidence of a mediating effect of vulnerability on the relationship between both problem- and emotion-focused coping and well-being.

9C Title: Time as Money or Money as Time? Temporal Evaluation of Income Increases Monetary Donations

David Falco, Ohio State University, USA
Selin A. Malkoc, Ohio State University, USA
Grant Edward Donnelly, Ohio State University, USA

In two studies we show that while seeing time in terms of money will decrease willingness to donate time seeing money in terms of time will increase willingness to donate money. Results are seen both in opinions towards donating as a whole and likelihood to donate a specific amount.

8B Abandon Distinctiveness in Good Old Days: The Effect of Nostalgia on Uniqueness Seeking

Yafeng Fan, Tsinghua University, China
Jing Jiang, Renmin University of China
Zuohao Hu, Tsinghua University, China

Three experiments demonstrated that nostalgia can weaken consumers' uniqueness seeking tendency which is driven by the enhanced social connectedness. The effect disappears when the social ties with other decision-makers are strong rather than weak. The research showed that nostalgia marketing may be inappropriate for products or services positioning uniqueness.

4C When More is Less and Less is More: Anchoring Perceived Calories Through Visual Complexity

Alexandra Festila, Aarhus University, Denmark
Ruxandra Monica Luca, University of Sussex, UK

The present research looks at the effects of visual complexity (vs. visual simplicity) of package design on consumers' calories estimation. Our findings suggest that restrained (vs. unrestrained) eaters estimate more (vs. less) calories from visually complex (vs. simple) packages.

13L Alexa, Can I Call You Mum? – A Developmental Perspective on Consumer Trust in Smart Home Technologies

Jonas Foehr, University of Bayreuth, Germany
Claas Christian Germelmann, University of Bayreuth, Germany

This qualitative study investigates how consumers build and maintain trust in their smart speakers. Findings suggest that with extended use consumers increasingly refer their trust to the perceived parent-like personality of the voice-interface. We contribute to existing work by linking consumer mental manifestations of smart technologies with trust development.

14N Helpful or Creepy? Consumers' Perceptions of AI-Enabled Frontline Technologies

Darima Fotheringham, Arizona State University, USA
Naomi Mandel, Arizona State University, USA
Monika Lisjak, Arizona State University, USA
Amy Ostrom, Arizona State University, USA

Perceived creepiness of AI technology is important but not well-understood. The paper aims to conceptualize and measure consumers' perception of creepiness in interactions with AI technology by examining the influence of expectation violations in the contexts of consumer privacy violation and technology human-likeness.

5N A Feast For the Eyes: How Augmented Reality Influences Food Craving and Evaluation

William Fritz, Oxford University, UK
Rhonda Hadi, Oxford University, UK
Andrew T. Stephen, Oxford University, UK

Augmented Reality (AR) technology has generated huge amounts of industry investment and buzz. In this paper we explore the effects that augmented reality has on craving and overall evaluation of healthy versus indulgent food items and show how these results are mediated by mental simulation.

13B Trolling For Trolls: Exploring the Effect of Internet Trolls on Subscription Rates of Live-Streamed Video Games

William Fritz, Oxford University, UK
Felipe Thomaz, Oxford University, UK
Andrew T. Stephen, Oxford University, UK

The live-stream video game industry was valued at $10.1B in 2018 and is projected to grow by $3B in 2019. However this sector is often criticised for being a toxic breeding-ground for Internet Trolls. This paper explores the effect that Trolls have on subscription rates to live-streamed video game channels.

1I Seeing the Unseen: The Role of Distrust in Considering Missing Information

Donald Ryan Gaffney, University of Cincinnati, USA
Emma Neybert, University of Cincinnati, USA
Frank R. Kardes, University of Cincinnati, USA
Robert Wyer Jr., University of Cincinnati, USA

Digital advertisements have taken the world by storm. However with consumers increasingly limited attention-span towards advertisements the amount of information provided by advertisements has decreased significantly. This research wishes to understand how the effects of having a distrust mindset on limited information impacts product judgements.

8F Does Feeling Ignorant Give Us More Control?

Donald Ryan Gaffney, University of Cincinnati, USA
Robert Wyer Jr., University of Cincinnati, USA
Frank R. Kardes, University of Cincinnati, USA

This research attempts to further distinguish between variants of uncertainty in a novel way. We investigate aleatory (chance) and epistemic (knowledge) uncertainty in their effect of perceived control. We find that aleatory uncertainty leads to lower perceptions of control whereas epistemic uncertainty leads to higher perceptions of control.

12E The Journey Towards 100k Followers: Psychosocial Elements That Connect Digital Influencers

Igor de Jesus Lobato Pompeu Gammarano, University of Amazon - UNAMA, Brazil
Emílio José Montero Arruda Filho, University of Amazon - UNAMA, Brazil

This working paper aims to analyze psychosocial elements such as meanings behaviors and intentions that emotionally connect digital influencers to their followers. Four psychosocial elements have been identified in the literature that enable this connection to be established; these are characterized as: expertise number of followers storytelling and digital lifestyle.

5D Why We Cannot Make Nice With Spice: The Link Between Spicy Foods and Aggressive Consumer Behavior

Tanuka Ghoshal, Baruch College, USA
Raj Raghunathan, University of Texas at Austin, USA

We examine the causal effects of spicy food consumption on aggressive behavior. Spicy food consumption increases physiological arousal as measured by heart rate which in turn leads to higher aggressive behavioral intent in a hypothetical consumer scenario. Conversely a cooling food such as a mint candy decreases aggressive intent.

10A Marketer-Driven Social Movements and Wicked Problems of Consumption

Alexei Gloukhovtsev, Aalto University, Finland
Tomas Falk, Aalto University, Finland
Laura Rosenberg, Aalto University, Finland
Emma Maria Salminen, Aalto University, Finland

The study examines marketer-driven social movements and the process through which they can help address problematic consumer behavior that is resistant to interventions at the individual level. The study also highlights the crucial supporting role that marketers play in helping new social movements take root and enact lasting positive social change.

2H Seeing Brands as Humans: Development and Validation of Brand Anthropomorphism Scale

Artyom Golossenko, University of East Anglia, UK
Kishore Gopalakrishna Pillai, University of East Anglia, UK
Lukman Aroean, University of East Anglia, UK

The research develops a scale to measure the construct of brand anthropomorphism. Across five studies the 12-item BA scale demonstrates competent psychometric properties for convergent invariance and discriminant validity and shows its unique position in nomological network of antecedent causes and consequential effects.

7D The Social Construction of Mythologies

Sarah Grace, University of Arkansas, USA

The Social Construction of Mythologies facilitates understanding between meanings held by society in the form of cultural myths and meanings formed during an individual's experience of cultural myth. Phenomenology and semiology converge converse and co-construct to help researchers imagine a continued tradition of culturally-informed scholarship in marketing.

16N Gimme' a Break! Determining When a Momentary Deactivation Leads to the Most Optimal Goal-Directed Consumption Behavior

Jerry Lewis Grimes, Grenoble Ecole de Management, France

Modern life is punctuated by breaks. We demonstrate how the framing of a break (i.e. congruency with the focal task and whether the break is expected vs. unexpected) motivates creative thinking and problem-solving towards a consumption goal pursuit with consequences for optimal shopping choices

14G Assessing the Added Value of Robotic Solutions For Elderly Individuals With a Loss of Autonomy Through Cocreation

Denis Guiot, Université Paris-Dauphine, France
Eloïse Sengès, University of Paris-Dauphine, France
Marie Kerekes, University of Paris-Dauphine, France
Laura Fiorini, Scuola Superiore Sant' Anna, Italy
Marleen De Mul, Erasmus University Rotterdam, The Netherlands
Isabelle Fabbricotti, Erasmus University Rotterdam, The Netherlands

In line with successful aging models a preliminary qualitative study with phenomenological interviews was implemented with 40 elderly individuals and caregivers. Complementary results from 8 cocreation meetings allowed us to prioritize the robotic functionalities to be improved and determine the real added value of robots in comparison with other IT solutions.

9H The Influence of Crowding Perception on Consumers' Money Donation Behavior: The Mediation of Self-Expression

Qingqing Guo, Shanghai Jiao Tong University, China
Bing Han, Shanghai Jiao Tong University, China

Three experiments' results reveal that participants in crowding (vs. non-crowding) surroundings are more incline to donate money and have a higher monthly and annual donation amount. Consumers' self-expression need is much stronger in crowding (vs. non-crowding) surroundings which driven consumer to be more likely response the money donation appeal.

16L Constrained Physical Space Constrains Time Availability: The Mediating Role of Competitive Mindset

Qingqing Guo, Shanghai Jiao Tong University, China
Liangyan Wang, Shanghai Jiao Tong University, China
Bing Han, Shanghai Jiao Tong University, China

Based on metaphor theory this paper indicates that crowding perception induces consumers' sense of time scarcity through four studies. That is the "constrained physical space constrains time availability" effect. The effect was moderated by consumers' time orientation and mediated by competitive mindset.

19A Does Online Shopping Increase Customer Loyalty?
The Role of Uncertainty Avoidance

Bingxuan Guo, University of Texas at San Antonio, USA
Yinlong Zhang, University of Texas at San Antonio, USA

This research investigates the joint effects of uncertainty avoidance and on online (vs. offline) shopping on customer loyalty. By measuring and manipulating uncertainty avoidance we found convergent evidence of this joint effect. Possible mediators and moderator are discussed.

17L The Shame of Sharing: Financial Constraints and Liquid Consumption

Yang Guo, University of Pittsburgh, USA
Cait Lamberton, University of Pennsylvania, USA
Nicole Marie Coleman, University of Pittsburgh, USA

If the "sharing economy" can help consumers both save money and enjoy variety why might some consumers feel uncomfortable doing so? We find accessing goods via sharing systems can create shame particularly among financially-constrained consumers. For these individuals accessing goods as a means of obtaining variety is seen as socially-inappropriate.

16O Measuring Mindful Consumption

Sharad Gupta, Delhi School of Business, VIPS-TC, India
Harsh Verma, Delhi University, India

Researchers have not yet developed any scale to measure mindful consumption. There is a strong need to have a scale to measure mindful consumption. The current research bridges this gap using mixed method research to develop a scale for Mindful Consumption that can be used for future empirical researches.

5E Seeing Healthy Food as a Treat Reduces Ambivalence Towards Food
and Leads to Healthier Food Choices

Simona Haasova, University of Vienna, Austria
Arnd Florack, University of Vienna, Austria
Teresa Koch, University of Vienna, Austria

Our studies show that consumers who perceive the health and taste of food as complementary rather than contrasting food characteristics do not only eat healthier in real life but also experience less ambivalent thoughts about food products in general and specifically for healthy food categories.

19D Social Density and Attention to Scarcity Cues on e-Commerce Sites:
Insights from Eye-tracking

Anne Hamby, Boise State, USA
Veronika Ilyuk, Hofstra University, USA
Anil Mathur, Hofstra University, USA

The current work uses eye-tracking technology to examine the effect of social density (i.e. physical crowding) on attention to scarcity cues that are encountered on e-commerce sites. We find that increased social density reduces attention to information about quantity (but not time) scarcity suggesting motivated avoidance information processing.

6B Healthcare Outcomes Are Influenced by Free Choice: How Variations in Placebo and Nocebo Effects Are Mediated by Trust and Moderated by Price

Hyerin Han, University of Minnesota, USA
Akshay Rao, University of Minnesota, USA

Placebo and nocebo are stronger when consumers can choose (vs. are assigned to) doctors because consumers' trust in doctors is lower when their choice is limited. This effect is moderated by price such that a limited choice leads to higher levels of mistrust when consumers pay high (vs. low) price.

12G The Affective Advantage in Social Network Search

Daniel He, National University of Singapore, Singapore

Although people are closely connected individuals lack the topographical perspective to know where they are located in the social network. Compared to people who used logic those who relied on their feelings were more successful in identifying friends in their own network who could connect them to an employer.

9F Breadth or Depth? Explore the Favor Budgeting Effect

Dongin He, Hong Kong Polytechic University, China
Fei Xu, Hong Kong Polytechic University, China
Yuwei Jiang, Hong Kong Polytechic University, China

Three studies show that favor givers care more about the breadth than the depth of favor exchange and tend to give favors to more receivers rather than fewer receivers. Moreover the effect is more salient when the relationship between the favor giver and receiver is distant.

16E The Influence of Multitasking on Consumer Mindset and Subsequent Choice

Diogo Hildebrand, Baruch College, USA
Dan Rubin, St. John's University, USA
Leandro Malloy-Diniz, Federal University of Minas Gerais School of Medicine, Brazil

The present research establishes that specialized depletion of executive resources resultant from engaging in multitasking induces concrete (vs. abstract) mindsets which have predictable effects on food choice. Through two studies we demonstrate that multitasking results in food choices consistent with lower-level construals (i.e. indulgent options).

16A Effects of Process and Outcome Simulations on Self-Regulation

Candy K. Y. Ho, Hong Kong Baptist University, China
Jessica Y. Y. Kwong, Chinese University of Hong Kong, China

This research shows that process simulation enhances but outcome simulation worsens consumer regulatory behavior subsequent to simulation. Such regulatory failure effect is driven by perceived vitality during the simulation thus is independent of the simulation context but dependent on whether the simulated activities are extrinsically motivating.

12D Differential Willingness to Share Consumption Information in Self-Threatening Social Comparison

Yuly Hong, Georgia Tech, USA
Sara Loughran Dommer, Georgia Tech, USA
Morgan K Ward, Emory University, USA

This research investigates how self-threatening social comparison influences consumers' willingness to share consumption information. We find that upward social comparison is threatening and subsequently decreases willingness to share consumption information. However we also find that this effect is mitigated when the information shared is in a domain high in identity-importance.

7Q Of the Known Unknown: Algorithmic Consumer Culture and Reontologized Consumer Subjects

Soonkwan Hong, Michigan Technological University, USA

The current state of algorithmic consumer culture as a constellation of individual practices as well as the isomorphic end-state of any successful enterprise calls for a meaningful diagnosis upon which consumer research can theorize the ever-growing and ubiquitous ambiguity in the form of products and services offered by (and for) algorithms.

8M The Effect of Loneliness on Material Attachment and Disposition Decisions

Bingyan Hu, University of Iowa, USA
Alice Wang, University of Iowa, USA
Catherine Cole, University of Iowa, USA

We examine how loneliness affects consumer disposition of their used but still useful material possessions. Three studies show that lonely (vs. non-lonely) people are more attached to their possessions and hence less willing to dispose of them. The effect of loneliness is attenuated when people believe fresh starts are possible.

12F Change How You Look at Things, and the Things You Look at Change: How Visual Perspective Affects Consumption Experience

Der-Wei Huang, Indiana University, USA
H. Shanker Krishnan, Indiana University, USA

Across three studies we investigate how the angle of pictures that consumers share affects their consumption experiences and subsequent behaviors. Specifically we show that when consumers share pictures taken from the actor's (vs. observer's) perspective they enjoy the experience more and share the experience more.

15J The Impact of Aging on Consumers' Reaction Toward Volume Promotions

Jiexian Chloe Huang, Hong Kong Polytechic University, China
Linying Sophie Fan, Hong Kong University of Science and Technology, China
Yuwei Jiang, Hong Kong Polytechic University, China

How aging shapes consumers' attitudes toward sales promotion? Three studies demonstrate that consumers of physically or psychologically older age exhibit less favorable attitudes toward volume promotions than younger consumers. This effect is sequentially mediated by the perception of future time limitation and perceived waste from extra product volumes.

8P Displays of Sadness or Aggression During Positive Emotional Experiences Alter Consumers' Assumptions About Product Experiences and Characteristics

Denny Huynh, Clemson University, USA
Oriana Rachel Aragón, Clemson University, USA

Sometimes happiness is displayed with smiles but sometimes it is also displayed with expressions that look like sadness or aggression called dimorphous expressions. Dimorphous expressions effectively communicate unique signals about expressers' motivations. This study demonstrates that experimentally manipulated dimorphous expressions alter consumers' expectations of product characteristics and experiences.

14I Exploring the Dimensions of Interactive Agent Personality

Na Kyong Hyun, Georgia Tech, USA
Samuel Bond, Georgia Tech, USA

We investigate consumer perceptions regarding the personality of interactive agent (IA) devices. An iterative process of item generation and dimension identification yielded a two-factor model that consists of two global personality dimensions ("social" and "functional") with four components underlying each dimension.

1K Any Smile? Any Gender?
What Matters in Static Ads to Boost Consumers' Product Evaluation

Giuliana Isabella, Insper, Brazil
Valter Afonso Vieira, Maringá State University, Brazil

Drawing on emotional contagion theory the authors propose that some smiles in static facial expressions can influence product evaluation more than others. Hence congruence between the model gender-product in a static ad and the gender of the viewer moderates the product evaluation. Across three experiments the results expand previous literature.

30 Who Does Evaluate Semantic Incongruent Cues Positively?
Examining the Moderating Effect of Autotelic Need For Touch

Hiroaki Ishii, Seikei University, Japan
Taku Togawa, Chiba University of Commerce, Japan
Jaewoo Park, Musashi University, Japan

Recent studies have found that consumers perceived novelty or uniqueness by experiencing disfluency due to semantic incongruence. In this study we demonstrate that high-ANFT (Autotelic Need for Touch) consumers prefer semantic incongruent cues related to heaviness which is not only activated physically but also visually and phonetically.

10D It's a Half-Robin Hood Thing:
How Political Activism by Corporations Drives Consumers to Cheat

Pradeep Jacob, Arizona State University, USA
Naomi Mandel, Arizona State University, USA

Corporations frequently engage in political activism either advocating for liberal or conservative issues. In this research we find that when a corporation takes a political stance opposing one's ideological beliefs liberals are more likely than are conservatives to engage in acts of dishonesty against that corporation.

13J What's Next? The Role of Contemporary Technology
in Shaping Consumers' Product Discovery

Shahzeb Jafri, York University, Canada
Eileen Fischer, York University, Canada

Researchers have recently called for the exploration of artificially intelligent technologies entering the consumer – experience assemblage. The following project will qualitatively study online music streaming to explore consumers' discovery of cultural products in technologically assisted fields. We will contribute towards consumption and technology literature and provide implications for the stakeholders involved.

9D Performing Pro-Sociality in the Face of Paradox: How do Consumers
Navigate Normative Ideologies While Participating in Prosocial Projects?

Shahzeb Jafri, York University, Canada
Eileen Fischer, York University, Canada

Although scholars have explicated pro-social motivations the ideological complexity involved in such projects remains ignored. Qualitatively studying the Syrian refugee resettlement in Canada the current project explicates how competing ideologies influence consumers engaging in pro-sociality. Preliminary findings explain consumers conducting ideological hybridization having theoretical and practical implications for stakeholders involved.

12J Effect of Online WOM (Word of Mouth) on Product Sales: Focusing on Channel Characteristics

Jaihyun Jeon, Seoul National University, South Korea
Taewook Lim, Seoul National University, South Korea
Byung-do Kim, Seoul National University, South Korea
Junhee Seok, Seoul National University, South Korea

This research takes two different online WOM (Word of Mouth) channels Twitter and blog and then analyzes their effect in automobile industry. More specifically we hypothesize and show that effects of WOM channels on a product sales may differ since channels have their own unique traits.

1E Skip My Empathy: Impact of Goal and Emotion on Ad-Skipping Rate and ad Effectiveness

Yongwoog Andrew Jeon, University of Texas at Austin, USA
Yuhosua Ryoo, Southern Illinois University, Carbondale
Hye Jin Yoon, University of Georgia, USA

We examined the effectiveness of emotional appeals in reducing ad-skipping rate. The results showed that consumers with an emotional (vs. informational) goal for watching YouTube videos showed stronger empathy which in turn reduced ad-skipping rate. We found that this effect was prevalent among those with a higher tendency to welcome emotion.

11H The Difference of Consumer Responses According to Nostalgia Type

Jeeyoon Jeong, Korea University, South Korea

The present study compares consumer responses to advertising following historical nostalgic thinking versus personal nostalgic thinking by focusing on the fit effect of construal level between the nostalgic thinking and ad message on the evaluation of the advertised brand.

16C The Empty Self: Addressing Dual Self-Discrepancies

You Jin (Julia) Jeong, Northwestern University, USA

The empty self experiencing dual self-discrepancies in agency and communion may clarify when consumers engage in compensatory strategies that repair emotions or resolve self-discrepancies. Two experiments reveal that focusing on discrepancy-resolution goals through high construals and feeling efficacious to achieve the goal redirects the empty self to actually tackle self-discrepancies.

7H Does Being Short Lead to Better Self-Control?

Lei Jia, Ohio State University, USA
Xiaoyan Deng, Ohio State University, USA
Xiaojing Yang, University of South Carolina, USA

We propose and find that being short which compares unfavorably to being tall on various social dimensions motivates consumers to cope with the disadvantageous situation through exerting better self-control.

6D The Effect of Control Deprivation on Consumers' Adoption of No-Pain, No-Gain Principle

Yanli Jia, Xiamen University, China
Robert Wyer Jr., University of Cincinnati, USA

Our research finds that when consumers feel out of control they tend to use the no-pain no-gain principle for product judgments because it exemplifies a structured conception of the relationship between actions and outcomes in the world and endorsing it reaffirms their belief that they can regain the reduced control.

13C When Collecting Personal Data From Consumers Backfires

Jianna Jin, Ohio State University, USA
Robert Smith, Ohio State University, USA
Rebecca Walker Reczek, Ohio State University, USA

Although consumers readily give companies their data (e.g. signing in through Facebook) little research has investigated the downstream consequences of such behavior. Two studies reveal that when a brand collects more (vs. less) personal information about a consumer the consumer responds more negatively toward service failure by the brand.

10H Consumer Resistance: Anarchy, Anti-Capitalism and the 'War Machine'

Hunter Jones, Aalto University, Finland
Joel Hietanen, University of Helsinki, Finland

While previous research focuses on largely safe and passive ways consumers resist market norms we highlight a more persistent pervasive and risky mode of social resistance that goes beyond exercising consumer choice. To do so our netnography analyzes a contemporary anarchist podcast's globally distributed resistant collective using non-representational theory.

7L Parenthood Increases Desire For Conspicuous Luxury Goods

Aziza Caimile Jones, Rutgers University, USA
Kristina Durante, Rutgers University, USA
Sarah Hill, Texas Christian University, USA
Hannah Bradshaw, Texas Christian University, USA

Little is known about how parenthood influences consumer behavior. A series of studies show that parenthood—manipulated or measured—leads to enhanced desire for certain kinds of products. Parenthood increased desire specifically for conspicuous luxury goods because parents believe that their social status impacts the social status of another person.

2B Product Line Extensions Hurts the Brand Owners: Psychological Ownership as a Mediator

Wonsuk Jung, University of Wisconsin - Madison, USA
Joann Peck, University of Wisconsin - Madison, USA
Mauricio Palmeira, Sungkyunkwan University, South Korea
Kyeongheui Kim, Sungkyunkwan University, South Korea

We examine the impact of product line extensions on brand preference and investigate the moderating effect of ownership status. Our studies show that owners and non-owners react differently towards product extensions: brand's upward line extensions negatively affect owners' preference for the brand by reducing owners' psychological ownership of the brand.

17D The Variation of Preference Stability in Decision-Making Across Gain and Loss Domains

Jungkeun Kim, Auckland University of Technology, New Zealand
Yuanyuan (Gina) Cui, Auckland University of Technology, New Zealand
Ryan Wang, University of Minnesota, USA
Raghunath Rao, University of Texas at Austin, USA
Akshay Rao, University of Minnesota, USA

We augment Tversky and Kahneman (1981)'s traditional comparable view of decision-making across the gains and losses domains in that the stability of preference for the sure/risky options could be different for the gain versus loss domains. We argue that people's preferences are relatively stable in the gain (vs. loss) domains.

3I Revisiting How the Elongation Bias Affects Consumer Perceptions

Dongeun Kim, University of Iowa, USA
Catherine Cole, University of Iowa, USA
Dhananjay Nayakankuppam, University of Iowa, USA
William Hedgcock, University of Minnesota, USA

We examine how the shape of packaging influences the elongation bias when consumers estimate the product volume. We find that the elongation bias is stronger for cylinder-shaped stimuli than for box-shaped stimuli. This research generalizes the salience-dimension model to differently shaped stimuli which are found in the marketplace.

19F Humanlike Underdogs: The Moderating Role of Service Type (SST vs. Face-to-Face) and Brand Status (Underdog vs. Top-Dog) on Brand Attitude

Yaeri Kim, Seoul National University, South Korea
Kiwan Park, Seoul National University, South Korea
Seojin Stacey Lee, Seoul National University, South Korea

We instigated the effects of service type on brand status on brand attitude. We find that people show more favorable attitude toward face-to-face service than self-service technology for underdog brands. However this effect was reversed in private consumption context. We also demonstrate mediation processes to account for the proposed effects.

3H Goals Come in All Shapes and Sizes: Can Goal-Shaped Products Increase Willingness-to-Pay?

Hae Joo Kim, Wilfrid Laurier University, Canada
Darlene Walsh, Concordia University, Canada
Philippe Wodnicki, Concordia University, Canada

When the shape of a product resembled a goal that consumers were pursuing participants expressed a greater willingness-to-pay for the product. This effect was observed for products that were conducive (Study 1) and non-instrumental (Study 2) to achieving the goal.

11M Rudy the Rutabaga: How Anthropomorphic Naming Increases Purchase Intentions For Irregular Produce

Kacy Kim, Bryant University, USA
Nathan Yoon, Sharon High School, USA
Danae Manika, Newcastle University, UK

In Study 1 we show that consumer buying intentions can be enhanced by giving irregular fruits anthropomorphic names but the effect does not hold for regular fruits. In Study 2 we demonstrate that the effect occurs for large corporate farms but not for small local farms.

11B Where to Place Green Products? Using "Up-Powerful" Metaphor to Promote Perceived Green Product Effectiveness

Kaeun Kim, University of Scranton, USA
Elizabeth Miller, University of Massachusetts, USA

Consumer beliefs that green products are less effective than non-green products are a key barrier to purchase. Building on the conceptual metaphor literature linking verticality and power (i.e. up=powerfulness) we show that vertical shelf layout can be used to influence consumer perceptions of product strength leading to greater purchase intentions.

12O I'm Proud But I'm Not Playing:
When Social Media Cues Undermine Charitable Giving

Colleen P. Kirk, New York Institute of Technology, USA

College alumni recalled memories and played a game on their college website. Hubristic pride was manipulated along with the presence or absence of a social media cue. Alumni with high hubristic pride reduced their donation amount in the presence (but not absence) of a social media cue.

8D Emotions, Not Knowledge, Are Power:
The Curios Case of Evidence Insensitive Product Rejection

Jan Andre Koch, University of Groningen, The Netherlands
Koert van Ittersum, University of Groningen, The Netherlands
Jan Willem Bolderdijk, University of Groningen, The Netherlands

When consumers reject any products marketers typically seek to allay the concerns consumers hold in support of this rejection. Deviant products however are intuitively rejected. Lacking substantive concerns supporting this rejection consumers rationalize it post hoc leading marketers' efforts astray. Being non-causal allaying these rationalizations does not affect rejection.

5P Does Food Packaging Make Us Fat?
The Mechanism of the Partitioning Paradox

Haruka Kozuka, University of Toyama, Japan

We replicated the research of Coelho do Vale et al. (2008) and Scott et al. (2008) to explain how the partitioning paradox occurs. We found that restrained eaters tend to eat more while non-restrained eaters tend to eat less when a fixed portion is partitioned into multiple smaller packages.

18D Sweeten Your (Shopping) Day! – How Glucose Affects the Acceptance
of Dynamically Priced Products and Goods

Caspar Krampe, Heinrich-Heine-University, Germany
Lasse Meißner, Heinrich-Heine-University, Germany
Nadine Gier, Heinrich-Heine-University, Germany
Peter Kenning, Heinrich-Heine-University, Germany

This research work examines whether glucose intake can influence the consumers' acceptance of dynamically priced products and goods by indirectly increasing the level of serotonin. Preliminary results provide evidence that the augmentation in the level of serotonin affects the consumers' reaction to dynamically priced commodities influencing psychological and social factors.

17K When is it a Good Time to Plan for Your Retirement?
The Use of Questions to Encourage Financial Planning

Ann Kronrod, University of Massachusetts Lowell, USA

People procrastinate financial planning for retirement – till it's too late. We address this problem by studying the effectiveness of using Questions (vs. Statements) to encourage retirement planning. Two studies suggest that Questions increase processing depth more concrete planning for retirement and greater likelihood to open/contribute to a retirement plan.

15D Self-Presentation in the Mating Market:
A Cross-Cultural Analysis of Costly Signaling Behavior

Chaim Kuhnreich, Concordia University, Canada
Lilian Carvalho, FGV/EAESP
Gad Saad, Concordia University, Canada

Examining costly signals displayed to potential mates on Tinder males are more likely to utilize conspicuous consumption in their profiles. However these behaviors are culturally dependent. In cultures where relative status and perceived belongingness between people are highly valued we find that females use conspicuous consumption also.

10E Does Imagining Seeing Bad Make You Not Do Good? The Effect of Identity-Based and Product Factors on Consumer Response to Cause Marketing Offers

Katina Kulow, University of Louisville, USA
Mina Kwon, University of Louisville, USA
Mike Barone, University of Louisville, USA

Can witnessing a moral transgression (e.g. shoplifting) by another individual affect a consumer's response to cause marketing (CM) offers? Across three experiments we demonstrate that based on the particular dimensions of consumer identity activated during decision making consumers may respond less or more favorably to such CM offers.

11G A World of Distrust:
How Exposure to Fake News Affects Consumer Product Perceptions

Mina Kwon, University of Louisville, USA
Mike Barone, University of Louisville, USA

The current research examines how exposure to fake news can influence product evaluations which are moderated by consumers' political ideologies. A series of experiments document the interactive effect of fake news exposure and political ideology on consumer perceptions of marketplace offerings unrelated to the fake news content.

2K How Political Elections Impact Brand Equity

Polina Landgraf, IE Business School, IE University, Spain
Antonios Stamatogiannakis, IE Business School, IE University, Spain
Haiyang Yang, Johns Hopkins University, USA

How might political elections impact brand equity? Large-scale empirical studies show that brands with an exciting personality can be more closely associated with liberal (vs. conservative) political orientation. Thus when liberals defeat (are defeated by) conservatives in elections the equity of brands with an exciting personality tends to increase (decrease).

17N Detecting Feelings of Financial Distress from Bank Transactions

Alixe Lay, University College London, UK
Joe Gladstone, University College London, UK

Using machine learning we are able to predict subjective feelings of financial distress from individuals' bank transactions aggregated from a money management mobile app with moderate accuracy (r = .43). Financial distress is linked to spending larger proportions in basic needs poor financial management impulsive spending and compensatory consumer behaviour.

17H The Dynamics of Consumers´ Over-Indebtedness

Julio Cesar Leandro, Fundação Getúlio Vargas, Brazil
Delane Botelho, EAESP-FGV, Brazil

This article explores the lived experiences of consumers that face over-indebtedness and the meanings associated to it. Precipitating and aggravating events work together as a snowball rolling upside-down and taking consumers to hit the rock bottom. This is experienced by consumers as a personal failure.

18L The Influence of Reference-Price Ads' Formats on Consumers' Price Perceptions and Buying Intentions

Chao-Feng Lee, National Chung Cheng University, Taiwan
Hsiu-Ju Wang, Chao Yang University of Technology, Taiwan
Yin-Hui Cheng, National Taichung University of Education, Taiwan
Shih-Chieh Chuang, National Chung Cheng University, Taiwan

Eye-tracking experiments tested the respective impacts of reference-price ads in horizontal and vertical formats and why these impacts occurred: e.g. subtraction or anchoring effects. Interestingly positive effects on buying intention and value perceptions disappeared when buyers were shown a calculation of their savings rather than the old and new prices.

11L Does Rejection Make You Feel Better? The Influential Role of Choice Type in Post-Purchase Regret

Chao-Feng Lee, National Chung Cheng University, Taiwan
Hsiu-Ju Wang, Chao Yang University of Technology, Taiwan
Yin-Hui Cheng, National Taichung University of Education, Taiwan
Shih-Chieh Chuang, National Chung Cheng University, Taiwan

Most research on post-purchase regret focuses on selection tasks rather than rejection tasks. Accordingly this paper investigates the potential effects of rejection tasks on regret via two studies. Both show shoppers who engage in a rejection task feel less regret than those who perform a selection task.

19P The Effect of Busyness on Consumer Preference For Joint Consumption

Jaewoo Lee, Boston University, USA
Frederic F Brunel, Boston University, USA

In two studies we find that perception of busyness ("I have a lot of work to do") decreases consumers' anticipated enjoyment and likelihood of engaging in joint consumption. We propose that such effects occur because perception of busyness leads to a decrease in consumers' perceived control over their time.

6C Assessing Health-Being in Community: A Community-Based Participatory Evaluation of the Veggie Rx Program in a Northeastern Community

Ada Leung, Pennsylvania State University, USA
Lisa Weaver, Pennsylvania State University, USA

This paper describes Veggie Rx a collaborative model to increase access to produce in the primarily Latino community. It describes how diverse community-based partners worked together to initiate system changes to build a sustainable and inclusive food system in a low-resourced community that aims to improve health and community well-being.

18A Price Promotion: How the Presentation of Price Drop Affects Purchase Intention

Mengmeng Liu, Chinese University of Hong Kong, China
Jessica Y. Y. Kwong, Chinese University of Hong Kong, China

Marketers often highlight price promotion by crossing out the old price (e.g. was: $76.99 now: $44.99). We examined (1) whether this simple strikethrough on the old price affects purchase intention; (2) if yes the direction of effect; and (3) whether this effect holds for both utilitarian product and hedonic product.

10B Parents' Debts, Children's Obligation? The Effect of Similarity on Consumers' Boycott of Parent and Subsidiary Corporation

Yung-Chien Lou, National Chengchi Uniersity, Taiwan
Wei-Chih Tseng, National Chengchi Uniersity, Taiwan

This study focuses on consumer boycott behaviors toward the parent and subsidiary corporations of a conglomerate when a wrongdoing affects the conglomerate. The results indicate that the similarity of the parent and subsidiary corporations generates assimilation or contrast effects which influence consumers' perceptions and their boycotts one or both corporations.

9L To Split or Not to Split? The Impact of the Breadth of Giving on Future Donations

Matilde Lucheschi, City University of London, UK
Oguz A. Acar, City University of London, UK
Jonathan Zev Berman, London Business School, UK

Individuals are increasingly spreading their donations across different charities. In this project we focus on the consequences of this behavior. A series of studies reveal that when individuals split their donations instead of donating the same amount to a single NGO they donate significantly less in the future.

3M Double Down When the Deck is Hot, Fold When It's Cold: Unseen Effects on Risk Perceptions

Josh Lundberg, University of Kentucky, USA

Within the domain of embodied cognition scholars have reached conflicting findings with regard to the effect of temperature on consumers. The current work seeks to disentangle these conclusions by demonstrating a higher order construct that can reconcile this conflict. Additionally it adds to the starkly limited scholarship on cold temperatures.

16G Choose Me, I Can Make You Safe! The Effect of Self-Protection Motivation on Consumer Preference For Anthropomorphized Products

Han Ma, University of Texas at Arlington, USA
Narayan Janakiraman, University of Texas at Arlington, USA
Franklin Velasco, Universidad San Francisco de Quito, Ecuador

In the current research we propose that anthropomorphized products can also help consumers cope with fears from physical threats and restore their feeling of the safety with the provision of the companionship. Using two studies we showed the initial evidence of the predicted relationship and explored a boundary condition.

14K Friend or Cognitive Assistant: Consumer Preference in Seeking Recommendation

Savisesh Malampallayil, SUNY Binghamton, USA
Smaraki Mohanty, SUNY Binghamton, USA

Considering cognitive voice assistants such as Alexa Siri or Google Assistant as recommendation sources we show that the likelihood of following the recommendation from an assistant over a friend is dependent on the product type and the riskiness of the recommendation.

13M Materialistic Enough to Matter:
The Effect of Materialism on the Reception of Innovative Products

KT Manis, Texas Tech, USA
Ashley Hass, Texas Tech University, USA
Rebecca Rabino, Texas Tech University, USA

Though many consumers are resistant to the adoption of radical innovations we investigate the moderating role of consumer materialism. We demonstrate that while low-materialistic consumers are more likely to purchase incremental rather than radical innovations high-materialistic consumers are equally receptive to both types of innovation.

19B Online Shopping Cart Abandonment: A Consumer Mindset Perspective

Chrissy Martins, Iona College, USA
Dan Rubin, St. John's University, USA
Diogo Hildebrand, Baruch College, USA
Veronika Ilyuk, Hofstra University, USA

Online shopping cart abandonment (SCA) is prevalent but under-researched. This work advances understanding the drivers of SCA—specifically the role of consumer mindsets. Through three studies we evince abstract (vs. concrete) mindsets affect the likelihood of SCA product involvement as the underlying mechanism and the moderating role of product descriptions.

7M SEST: A New Integrative Model to Illustrate How Social Class, Economic System-Justification, and System Threats Jointly Influence Consumer Preferences

Matthew Maxwell-Smith, Western University, Canada
Allison R. Johnson, Western University, Canada
June Cotte, Ivey Business School, Canada
Sharon Shavitt, University of Illinois at Urbana-Champaign, USA
Steven Shepherd, Oklahoma State University, USA

We test a new integrative model that explains how social class economic system-justification and relevant system threats jointly affect consumer preferences. Our findings address inconsistencies in system-justification theory and help to explain consumer preferences for offerings that are perceived as more symbolic of or antagonistic to the free-market economic system.

6I The Quantified Self: The Effects of Activity Tracking and Anthropomorphization on Consumer Health Motivation and Behavior

Martin Mende, Florida State University, USA
Maura Scott, Florida State University, USA
Gergana Y. Nenkov, Boston College, USA
Anders Gustafsson, Karlstad University, Sweden
Lane Peterson, Florida State University, USA

Self-tracking devices claim to motivate consumers to achieve better health but it is unclear if this is always the case. Anthropomorphization of these devices is a common practice as it typically enhances consumers' perceptions of products. This research shows however that when applied to self-tracking devices anthropomorphism reduces health motivation.

1L The Impact of ad Depth of Field Matching Product Categories on Product Evaluation

Lu Meng, Renmin University of China, China

The so-called depth of field refers to the depth of field and shallow depth of field in the photographic space according to the clearly identifiable imaging distance. Our research from the visual advertising perspective through different depth of field advertising presentation types can also affect the audience's emotional (cognitive) decision-making.

7F Homeyness and Domesticity in Work-Related Marketplace Experiences

Laetitia Mimoun, City University of London, UK
Adèle Gruen, Goldsmiths, University of London, UK

We advance the theoretical understanding of homeyness and domesticity in work-related marketplace experiences. We identify the forms that homeyness and domesticity take outside of the home's boundaries an essential task as the increasing merging of work and leisure private and public consumption and production recasts our understanding of these concepts.

17I The Expectation Gap between Borrowers and Lenders in Informal Microloan Markets

Coby Morvinski, Ben Gurion University, Israel
Yaniv Shani, Tel Aviv University, Israel

A series of four experiments demonstrate that given a small informal loan between friends depending on the role taken (borrower vs. lender) individuals operate under different mindsets (social vs. economic) which consequently leads to different outcome expectations. These findings may explain why many small informal loans remain unpaid.

8N The Incidental Effect of Hope and Pride on Compliance With Health-Care Warning Messages

Angela Negrão, UFPR, Brazil
Danielle Mantovani, Federal University of Paraná, Brazil
Victoria Vilasanti, Federal University of Paraná, Brazil
Rafael Demczuk, Federal University of Paraná, Brazil

This research shows that hope a future-oriented emotion increases risk perception and consequently compliance with health-care warning messages compared to pride a past-oriented emotion (Studies 1 and 2). The opposite effect is observed when the temporal focus is not associated with specific emotions (Study 3).

5R The Influence of Information on Consumers' Intention to Reduce Food Waste in Three European Countries

Christina Maria Neubig, Technical University of Munich, Germany
Margot Van Cauter, Katholieke University Leuven, Belgium
Simona Grasso, University of Reading, UK
Sophie Hieke, EUFIC
Sandra Knoepfle, Technical University of Munich, Germany
Anna Macready, University of Reading, UK
Natalie Masento, University of Reading, UK
Camila Massri, EUFIC
Esereosa Omoarukhe, University of Reading, UK
Jutta Roosen, Technical University of Munich, Germany
Liesbet Vranken, Katholieke University Leuven, Belgium

This study investigates whether providing information about the impact of food waste and food waste practices influences consumers' behavioral intention toward food waste reduction. Results from an online survey (N=2248) show that practice information significantly increases participants' intention to reduce food waste while impact information has no effect on intention.

17G Can't Wait to Sell? Fear of Missing Out (FOMO) and the Reversal of Endowment Effect (ROE)

Maria Ng, University of Houston, USA
Dejun Tony Kong, University of Houston, USA

Across three experiments we found that individuals who experienced higher state FOMO were more likely to exhibit ROE. With the mediating effect of perceived gain/loss of selling or upgrading controlled for psychological ownership/disownership of the current possession robustly mediated the relationship between state FOMO and ROE.

9G Self-Construal and the Visual Existence of Others' Charitable Giving

Mayuko Nishii, Waseda University, Japan
Takeshi Moriguchi, Waseda University, Japan

Previous literature has revealed that viewing the charitable donations of others influences the intent to donate negatively because of a heightened state of self-sufficiency. However we show that such an effect may be reversed depending on consumers' self-construal. Our study derives a new perspective on donation behavior by considering self-construal.

17A Discounting Just as Much: Abundance Leads to Myopic Intertemporal Choices

Gergely Nyilasy, University of Melbourne, Australia

Existing literature suggests scarcity impairs consumers' cognitive and decision-making performance and abundance restores normal functioning. Present empirical work challenges this second assumption and shows abundance mindsets lead to unwarranted temporal discounting. The author argues this divergent finding can be explained by inadequate conceptualizations and operationalizations of abundance in the past.

15E An Age Bias in Creativity Judgment

Ga-Eun (Grace) Oh, Open University of Hong Kong, China
YeEun Choi, University of Alabama, USA
Inseong Jeong, Hong Kong University of Science and Technology, China
Mo Wang, University of Florida, USA

Due to population aging more and more older workers remain in the workforce in many societies. As creativity assessment has become one of the important practices in organizations relying on creativity to survive and thrive this research investigates whether when and how creativity judgment is biased towards older people.

15B Subjective Age and Self-Control

Ga-Eun (Grace) Oh, Open University of Hong Kong, China
Keith Wilcox, Columbia University, USA

While people cannot change their chronological age they can feel younger or older than their chronological age. This research investigates how feeling younger than one's age influences self-control in consumption decisions. Our findings show that feeling young can improve self-control particularly when making food consumption decisions.

5T Sharing #Foodporn or #Healthyfood? The Effect of Profile Privacy Settings on Consumption Enjoyment

Marie Ozanne, Cornell University, USA
Anna S. Mattila, Pennsylvania State University, USA

How does sharing food pictures on social network sites affect consumption enjoyment? We demonstrate that sharing pictures of indulgence (vs. healthy) foods under a private (vs. public) privacy decreases anticipated positive judgement and indirectly affect consumption enjoyment. As such public networks are liberating when sharing self-interested [eating] pleasurable experience.

19C Seeing Red? Loss of Personal Control Reduces Consumers' Interest in Sales Promotions in Crowded Retail Spaces

Johanna Palcu, Vienna University of Economics and Business, Austria
Simona Haasova, University of Vienna, Austria
Oliver B. Büttner, University of Duisburg-Essen, Germany
Arnd Florack, University of Vienna, Austria

Applying an online survey as well as an eye-tracking experiment in the field the current research demonstrates that consumers are less likely to rely on sales promotions when the number of other customers present decreases consumers' perceptions of personal control.

18G Typing or Clicking: The Effect of Typing a Promotion Code on Online Shopping Satisfaction

Taehoon Park, Florida Gulf Coast University, USA
Hyoseok Kim, University of Alberta, Canada

In the online shopping context we examine the effect of typing promotion code redemption methods leads more favorable purchase experience than clicking a confirmation button where the same promotion code is already typed in. Furthermore we show that this effect is attenuated for the hedonic product purchase.

19R How to Make Everyday Life More of an Experience: Employ Rituals

Samuel Park, University of Minnesota, USA
Kathleen Vohs, University of Minnesota, USA

We tested whether rituals would help consumers see the moments they live through feel like more of an experience. An experiment that varied the use of rituals with material goods versus experiences found as predicted that rituals boosted perceptions of having an experience for consumers in the material goods condition.

17B Is a Gift on Sale "Heart-Discounted"?: Givers' Misprediction on the Value of Discounted Gifts

Yookyung Park, Seoul National University, South Korea
Youjae Yi, Seoul National University, South Korea

The present research reveals that givers and recipients differ in their evaluation of gifts on a price discount. Whereas givers perceive discounted (vs. regular priced) gifts as less valuable recipients' evaluations do not differ. This discrepancy is driven by givers' perception that discounted gifts are less thoughtful.

3A Hungry For Different?: The Effect of Hunger on Uniqueness-Seeking Behavior

Jane Park, University of California Riverside, USA
Thomas Kramer, University of California Riverside, USA

Surprisingly little is known about how hunger – a bodily feeling of resource scarcity - affects consumer choice. We evince hunger's impact on consumer uniqueness-seeking behavior by demonstrating a novel downstream consequence of hunger a reversal thereof when hunger turns to hanger and the driving role of avoidance to seek attention.

19O Your Time For Me, My Time For You: Consumers' Asymmetric Response to Interpersonal Usage of Time

Yookyung Park, Seoul National University, South Korea
Yuna Choe, Texas A&M University, USA
Youjae Yi, Seoul National University, South Korea

The present research explores whether consumers vary in their levels of appreciation upon interpersonal usage of time. Our results show that consumers perceive time as deserving greater appreciation when they receive time from others than when they spend time for others.

8H The Effect of FOMO on Variety-Seeking Behavior

Jane Park, University of California Riverside, USA
Thomas Kramer, University of California Riverside, USA

Despite the prevalence of social media-driven fear-of-missing-out (FOMO) in consumers' lives little is known about how FOMO affects consumers' decision-making. We find FOMO lowers self-esteem which guides greater variety-seeking. Further we demonstrate that differences in decisiveness moderate the effect of FOMO on variety-seeking.

16F I Want to Disbelieve: Political Ideology and Misinformation in the Marketplace

Fabricia Volotão Peixoto, EAESP-FGV, Brazil
Delane Botelho, EAESP-FGV, Brazil

Political ideology may influence the way one judges a misinformation as true or false. In a observational study we found evidence that liberals (as compared to conservatives) are more likely to believe in a false claim related to the marketplace.

9B I'm Touched by Your (Disgusting) Words: How Haptic Vocabulary Helps Overcome the Negative Effect of Disgust on Prosocial Behavior

Olivia Petit, Kedge Business School, France
Johannes Kraak, Toulouse Business School, France
Renaud Lunardo, Kedge Business School, France

Through two studies we show that disgust reduces the willingness to donate for charities focussing on topics such as homeless people and food waste. However the negative impact of disgust can be reduced by using haptic vocabulary limiting the negative effect of disgust on trust.

1A When Politicized Advertising Campaigns Backfire

Aviva Philipp-Muller, Ohio State University, USA
Joseph Siev, Ohio State University, USA
Richard Petty, Ohio State University, USA

We sought to test whether staunch one-sided messages on controversial issues would garner oppositional word of mouth among ambivalent consumers. We found that one-sided tweets (vs. balanced tweets) led ambivalent consumers to share oppositional articles (Studies 1a and 1b) and engage in oppositional word of mouth (Study 2).

11C The Curse of Similarity: How Similarity Can Help or Hurt Persuasiveness

Suntong Qi, Chinese University of Hong Kong, China
Xianchi Dai, Chinese University of Hong Kong, China
Canice Man Ching Kwan, Open University of Hong Kong, China

We study how the similarity between consumers and salespersons affects persuasiveness. Four studies and secondary data demonstrate that consumers more likely take a recommendation from a similar (vs. dissimilar) salesperson when purchasing an unfamiliar product but the reverse is true when purchasing a familiar product.

11N Partner or Servant? How to Build Relationship With Feature-Rich Product and Feature-Poor Product

Zhou Qi, Huazhong University of Science and Technology, China
Yuanqiong He, Huazhong University of Science and Technology, China

This research explores effects of anthropomorphism strategy for products' feature designing. The results indicated that feature-rich products with partner role will improve consumers' attitude towards the product while feature-poor products with servant role will improve consumers' attitude towards the product. Product involvement will moderate effect. This study enriches consumer-brand relationship.

12H Who is Watching Me? Consequences of Reciprocal Reviewing to the Firm

Laura Rifkin, Brooklyn College, USA
Canan Corus, Pace University, USA
Colleen P. Kirk, New York Institute of Technology, USA

This investigation focuses on the unintended consequences when a consumer is the one being reviewed within the context of the P2P sharing economy. Drawing on social exchange theory we propose negative reviews will elicit reactions towards the seller which spill over to the booking platform and manifest as negative WOM.

7I When Loneliness Increases Self-Gifting: The Moderation of Attachment Style

Cindy B Rippé, Grenoble Ecole de Management, France and University of North Georgia, USA
Carolina O. C. Werle, Grenoble Ecole de Management, France
Amanda Pruski Yamim, Grenoble Ecole de Management, France

Given the rise of loneliness we investigate the impact of loneliness on self-gifting. Drawing upon theoretical connections of loneliness and interpersonal attachment style we demonstrate that lonely consumers are more likely to self-gift for reward and therapy. Secure vs. insecure attached individuals are more influenced by loneliness in their self-gifting.

16B The Effect of Effort, Goal Attainability and Feedback on Engagement in Goal Pursuit

Graziela Perretto Rodrigues, Federal University of Paraná, Brazil
Dilney Gonçalves, IE Business School, IE University, Spain
Paulo Henrique Muller Prado, Federal University of Paraná, Brazil

Goal literature suggests that positive feedback is more effective than negative feedback in initial stages of goal pursuit. However we show that negative feedback can also generate engagement at this stage. The amount of effort previously invested and goal certainty are two conditions that promote this effect.

14B Part Human, Part Machine: The Perceptions of Co-Created Products

Wendy De La Rosa, Stanford University, USA
Jennifer Aaker, Stanford University, USA

Consumers are increasingly faced with products that are co-created by both humans and machines yet little is known about how consumers perceive these co-created products. We analyze consumers' perceptions and willingness to pay for machine-made human-made and co-created products and show the benefits of highlighting co-creation.

4F When Displaying Art Can Signal Higher Social Class: The Role of Processing Fluency in Signaling Social Class Through Art

Soo Yon Ryu, Seoul National University, South Korea
Sang-Hoon Kim, Seoul National University, South Korea
Kyoungmi Lee, Seoul National University, South Korea

We focus on processing fluency as a determinant in signaling social class through art. When observers experience subjective difficulty in processing art they tend to infer displayers as member of high social class. This effect is mitigated when observer has high art expertise as misattribution of source of fluency dissipates.

12A Does Social Media Deform the Formation of Interpersonal Trust?

Rabea Schrage, Heinrich-Heine-University, Germany
Sebastian Danckwerts, Heinrich-Heine-University, Germany
Svenja Rademacher, Heinrich-Heine-University, Germany
Peter Kenning, Heinrich-Heine-University, Germany

This empirical study examines the role of trust in the context of Social Media Influencer (SMI). Using structural equation modelling the preliminary results indicate that SMI's ability is a significant antecedent of the consumers' trust in SMI which in turn positively affects consumers' purchase intention.

8C Identity Related Embarrassment:
When and Why People Compensate For Others' Misbehavior

Julia E von Schuckmann, ESADE Business School, Spain
Lucia Salmonson Guimarães Barros, FGV-EAESP, Brazil
Grant Edward Donnelly, Ohio State University, USA
Marco Bertini, ESADE Business School, Spain

We propose that identity related embarrassment may arise by the wrongdoing of a fellow group member and that this experience triggers reparatory behaviors but only when the spectator and the wrongdoer share a social identity that is distinct from that of others in the environment. Two experiments support our theory.

1C The Reactance Decoy Effect:
How Including an Appeal Before the Target Message Increases Persuasion

Birga Mareen Schumpe, New York University Abu Dhabi, United Arab Emirates
Jocelyn J. Bélanger, New York University Abu Dhabi, United Arab Emirates
Claudia F. Nisa, New York University Abu Dhabi, United Arab Emirates

Looking for ways to lower consumers' reactance to your persuasive appeal? In two studies we found that including a so-called reactance decoy message before your target message leads to more positive attitudes toward the target object as well as greater buying intentions.

19L Through the Sensory Gate to Liminality: WaterFire's Longevity

Shawn Patrick Scott, University of Rhode Island, USA
Hillary A Leonard, Univeristy of Rhode Island, USA

WaterFire an award-winning public sculpture of fire braziers is a multisensory event that has revitalized the city of Providence RI. The research purpose is to better understand the longevity of this event by drawing upon and contributing to sensory literature and social theories including liminality and the liminoid environmental theater.

13F Are Interdisciplinary Ideas Always Good?
Field Insights on New Information Consumption

Amir Sepehri, Western University, Canada
Seyednasir Haghighibardineh, Washington State University, USA
Rod Duclos, Western University, Canada

Using a language-processing software we text-mined a famous repository of online talks presenting "novel" ideas. Contrary to expectations we find that presentations featuring numerous topics within themselves generate less rather than more interest (i.e. fewer views). We identify boundary conditions wherein this negative main-effect is counteracted.

18K The Few the Better? Number of Functions and Product Effectiveness

Manqiong Shen, Sun Yat-Sen University, China
Xiuping Li, National University of Singapore, Singapore
Haizhong Wang, Sun Yat-Sen University, China

In this research we examine the effect of versatility in function on consumer judgment. In three studies we demonstrate the Dilution Effect--claiming multiple functions currently could decrease products' effectiveness judgment. We find a moderating effect of lay belief about versatility on the Dilution Effect.

5F The Interactive Effect of Variety and Processing Strategy on Calorie Estimates

Liang Shen, University of Cincinnati, USA
Fengyan Cai, Shanghai Jiao Tong University, China
Robert Wyer Jr., University of Cincinnati, USA

Given the inconsistent findings about the relationship between food variety and calorie estimates we propose simulation of eating as one moderator. Simulation (or not) leads to different processing strategies which can interact with variety to affect calorie estimates. Three experiments confirm these effects and demonstrate their generalizability over other judgment domains.

4H The Magic of Organizing:
How Product Arrangement Styles Influence Perceptions of Products and Owners

Jie(Doreen) Shen, University of Illinois at Urbana-Champaign, USA
Aric Rindfleisch, University of Illinois at Urbana-Champaign, USA

Inspired by the recent trend of "tidying up" we examined two different product arrangement styles and showed that they influence consumer perceptions of both product attributes as well as inferences of the owner's personality. We also demonstrate that the main effects were moderated by preference for order and structure.

15I I Can Tolerate the Manager, But Not the Receptionist:
How Cultural Orientation Affects Consumers' Reaction to Service Failure

Jie(Doreen) Shen, University of Illinois at Urbana-Champaign, USA
Jimmy Wong, Singapore University of Social Sciences, Singapore
Sharon Shavitt, University of Illinois at Urbana-Champaign, USA

Cultural orientation affects responses to service failure for service providers of different ranks. Secondary data show cultural differences in responses to services and two experiments show cultural differences in negative affect to rude service from lower-ranking service providers. The findings reflect vertical individualists' concerns about power as the mechanism.

8K Villains Are Lonely Too! How Loneliness Influence
Consumers' Preference For Superhero and Supervillain Products

Sirajul Arefin Shibly, SUNY Binghamton, USA
Jinfeng Jiao, SUNY Binghamton, USA

The literature suggests that in an attempt to create or restore social inclusion lonely individuals may pursue unique products. However we suspect that despite being unique products with villain symbols represent immoral social outcasts. Therefore lonely individuals are likely to demonstrate less positive attitude towards products with such symbols.

7J How Insecure Narcissists Become Cultural Omnivores: Consuming Highbrow Culture
For Status Seeking and Lowbrow Culture For Integrity Signaling

Hanna Shin, Hongik University, South Korea
Nara Youn, Hongik University, South Korea

The current research examines how individual personality traits affect cultural consumption. Through two studies we demonstrate that narcissists with a sense of insecurity—i.e. low self-esteem or low self-perceived authenticity tend to become cultural omnivores preferring both highbrow and lowbrow culture.

8A The Role of Authentic and Hubristic Pride on Green Product Consumption

Aysha Siddiqua, Monash University, Australia
Ali Gohary, Monash University, Australia
Pingping Qiu, Monash University, Australia

This research investigates the relationship between pride (authentic versus hubristic) and propensity for green product consumption. Two studies (chronic and primed) show that authentic (versus hubristic) pride consumers exhibited higher willingness to try green (versus regular) products. The implications of these findings are discussed.

11A Location, Location...Mailing Location?
Postal Address is a Signal and Affects Consumers

Woojong Sim, Saint Louis University, USA
Nicolas Jankuhn, Saint Louis University, USA
Clark Johnson, Saint Louis University, USA
Brittney Bauer, Saint Louis University, USA
Katie Kelting, Saint Louis University, USA

Service firms (i.e. UPS Regus) have begun offering a new option for personalized business mailboxes. Specifically unique street addresses are now available. The current research examines consumers' response to postal address and utilizes signaling theory to show why consumers respond more favorably to a street (vs. PO Box) address.

5H Mindless Chewing: Effect of Gum Chewing on Consumer's Food Consumption

Amit Surendra Singh, Southern Connecticut State University, USA
H. Rao Unnava, University of California, Davis, USA
Xiaoyan Deng, Ohio State University, USA
Vasu Unnava, University of California Davis, USA

This research explores whether frequent gum-chewing leads to higher levels of chewing of regular food. We demonstrate that frequent gum chewing increases chewing of the regular food. Further the number of bites taken is similar irrespective of whether they chew gum or not.

4D The Cost of Looking Natural:
Why the No-Makeup Movement Led Consumers to Buy More Beauty Products

Rosanna Smith, University of Georgia, USA
Elham Yazdini, University of Georgia, USA
Pengyuan Wang, University of Georgia, USA
Saber Soleymani, University of Georgia, USA

Although the social media driven "no-makeup movement" rejected the use of cosmetics we find that the movement is associated with increased consumption of makeup. This is due to the tension that arises between the desire to be attractive and the social penalization that comes with overt effort towards one's appearance.

12B What Cultural-Cognitive Frames Support the Institutionalization of Online Reviews?

Andrew Smith, Suffolk University, USA
Martin A. Pyle, Ryerson University. Canada
Yanina Chevtchouk, University of Glasgow, UK

Fake and biased reviews threaten to harm the legitimacy of the online review an important marketplace institution. Drawing on data from 22 in-depth interviews we study consumer awareness of deceptive review practices and identify the legitimacy-supporting cultural-cognitive frames consumers employ to make sense of the institution of online reviews.

19K Constraints and Facilitators of Sport Event Participation:
Exploring a New Cultural Context

Rana Sobh, Qatar University, Qatar
Kevin Filo, Griffith University, Australia
Millie Kennely, Griffith University, Australia

We explore physical activity participation in Qatar and challenge the assumption that access to and experiences of sport events are universal. We find that sport participation is an amalgam of constraining and facilitating factors and that cultural norm political agendas and geography affect physical activity participation in our context.

4J Does Green Equal Green? Consumer Responses Towards Different Shades of Green

Stefanie Sohn, Technische Universität Braunschweig, Germany
Barbara Seegebarth, Technische Universität Braunschweig, Germany

Green does not equal green when consumers evaluate logos of green brands colored in green. Warm instead of cold shades of green are associated with environmental friendliness translating into a green brand image.

16D The More the Merrier? Consumers Expect Greater Success
When Pursuing Goals With Others Versus Alone

Pooja Somasundaram, Indiana University, USA
Jenny Olson, Indiana University, USA
Elanor Williams, Washington University, USA

Consumers typically pursue their goals alone but are often advised to pursue them with others. But does group goal pursuit result in anticipated (and real) "success"? We show that consumers pursuing goals in a group initially feel more positive and optimistic about their goals but that positivity fades over time.

3N The Effect of Sensory Incongruence on Product Preferences

Jiaqi Song, Hong Kong Polytechic University, China
Yuwei Jiang, Hong Kong Polytechic University, China

This research studies the impact of sensory incongruence (a low degree of fit among different sensory characteristics) on consumers' product preferences. Two studies demonstrate that after encountering an incongruent (vs. congruent) sensory experience consumers are more likely to prefer virtue rather than vice options in their product choices.

18C Moderators of the Denomination Effect:
Role of Hedonic Versus Utilitarian Consumption and Denomination Matching

Joydeep Srivastava, Temple University, USA
Yuqian Chang, Temple University, USA

The denomination effect suggests that individuals are less likely to spend when money is in the form of a single large denomination (e.g. a $10 bill) relative to many smaller denominations (e.g. ten $1 bills). This research examines whether hedonic versus utilitarian considerations and denomination matching moderate the denomination effect.

7K I Believe, But I Don't Follow! Religious Deviance:
Causes, Consequences, and Coping Mechanisms

Arti Srivastava, Indian Institute of Management Udaipur, India
Prakash Satyavageeswaran, Indian Institute of Management Udaipur, India

Deviance from religious norms in practicing followers results in internal value conflict and/ or social consequences of non-compliance. Based on in-depth interviews with self- reported religious deviants present study identifies de-norming of institution rationalization borrowing of beliefs and concealment as coping mechanisms in situations of religious deviance.

7C Consumers' Perceptions of Sustainability in Domains Varying in Closeness to Self

Catalin Mihai Stancu, Aarhus University, Denmark
Alice Grønhøj, Aarhus University, Denmark
Liisa Lähteenmäki, Aarhus University, Denmark

Sustainable choices are seen as solutions for current climate problems. Insights into consumer understanding of sustainability and main drivers of sustainable behaviors are needed to promote change across domains. Egoistic motivations were more prevalent in food than apparel while certain identity clashes had potential to prevent certain sustainable apparel-related behaviors.

8E Source Matters: The Effect of Integral Versus Incidental Pride on Consumer Self-Control

Julia Storch, University of Groningen, The Netherlands
Jing Wan, University of Groningen, The Netherlands
Koert van Ittersum, University of Groningen, The Netherlands

The self-conscious emotion pride can enhance and undermine consumers' self-control by motivating them to pursue future achievement or seek reward for prior achievement respectively. We reconcile these conflicting tendencies and propose that pride thematically-related (integral) to the domain of a focal self-control dilemma promotes self-control whereas unrelated (incidental) pride increases indulgence.

3E The Color of Life: Effects of Life Meaninglessness on Color Preference

Lei Su, Hong Kong Baptist University, China
Yuwei Jiang, Hong Kong Polytechic University, China

An eye-tracking experiment a field study and two lab experiments provide convergent evidence that people' perceived life meaninglessness leads them to pay more attention to and prefer objects with high-saturated colors over those with low-saturated colors. An emptiness-filling mechanism is proposed to explain this observed effect.

2C The Effect of Social Exclusion on Attitudes Toward Ingroup and Outgroup Brands: The Role of Affiliation Motive and Self-Construal

Yoko Sugitani, Sophia University, Japan
Tian Fu, Sophia University, Japan

This study highlights independent/interdependent self-construals that moderate the effect of social exclusion on consumer attitudes toward ingroup and outgroup brands. When socially excluded independent and interdependent consumers experience increased and decreased affiliation motives which caused higher preferences for outgroup and ingroup brands.

17F Give Me the Bonus Later: Awe Increases Consumer's Preference for Long-term Benefit in Intertemporal Choice

Wenwen Sun, Renmin University of China
En-Chung Chang, Renmin University of China

This article proposes an effect of awe on intertemporal decisions. Take time perception as the mediator we associate awe with intertemporal decisions which not only enriches the findings on the influence of awe on consumer behaviors but also finds a new factor that can alter consumers' intertemporal decisions.

15G Cultural Differences in Trait Inferences of Brand Personality

Satoko Suzuki, Hitotsubashi University Business School, Japan
Satoshi Akutsu, Hitotsubashi University Business School, Japan

This study examines cultural differences in the extent to which people infer traits for brands. Based on the recent findings regarding cultural variations in trait inferences we hypothesized that Westerners who have stronger tendency to infer traits from social behavior can more associate brands with human traits than East Asians.

16I The Protective Self: Consumers Compensate For Low Personal Control by Pursuing Clear and Coherent Self-Views in Consumption

Yangyi Tang, Hong Kong Baptist University, China
Alex S.L. Tsang, Hong Kong Baptist University, China

This research demonstrates that consumers especially those high on individualism may compensate for low control by preferring the products that help to reaffirm clear-defined and temporally coherent self-views. Specifically low control consumers were found to prefer polarizing products (Study 1) and be more likely to engage in reconsumption (Study 2).

7O Identity Contamination in Circular Economy Products

Anna Tari, Boston University, USA
Remi Trudel, Boston University, USA

We investigate why circular economy products have been met with trepidation. Three studies reveal that the circular material inputs matter participants prefer products made from plastic waste compared to products made from recycled clothing. This is because circular products made from recycled clothing are contaminated with others self-identity.

14M Others vs. Fate: An Exploration of the Nature of Loss of Control, Compensatory Consumption, and Consumer Responses to Smart Technology

Jasper Teow, National University of Singapore, Singapore

We posit that a perceived loss of control due to others(vs. fate) invokes a personally agentic(vs. externally agentic) coping mechanism in consumers and that their compensatory coping strategies are reflected in their preference for device-controlled(vs. voice-controlled) smart technology products as these products exhibit characteristics that map onto personal(vs. external) agency.

11E Back to Basics: Increasing Assortment Size Leads to Selection of Prototypical Choice Options

Jasper Teow, National University of Singapore, Singapore

We posit that consumers choosing from a large (vs. small) assortment tend to "go back to basics" and select options prototypical of the focal product category (e.g. chocolate strawberry vanilla flavor for ice-cream). This result can be explained by a greater categorical (vs. comparative) mindset that large assortments activate.

7G Perceptual Distortion: When Are Environmentally-Friendly Practices Perceived to be Less Impactful?

Maryam Tofighi, California State University Los Angeles, USA

This research sheds light on a perceptual distortion that occurs between how impactful individuals perceive their regular environmentally-friendly actions such as recycling and how objectively impactful they are. The results of this study shows that individuals incorrectly perceive the more common and well-established pro-environmental actions as highly-impactful deeds.

18H How the Experience of Heaviness Versus Lightness Can Influence Preference For Combined and Partitioned Prices

Taku Togawa, Chiba University of Commerce, Japan
Rajat Roy, Bond University, Australia
Hiroaki Ishii, Seikei University, Japan
Jaewoo Park, Musashi University, Japan

Two laboratory experiments found that when participants experienced heaviness (lightness) they exhibited a more favorable attitude and purchase intention towards a combined (partitioned) versus partitioned (combined) price framing. This effect was mediated by processing fluency. The robust findings were replicated using different product categories and heaviness manipulations.

3J The Bright Side of Darkness – The Effect of Ambient Lighting on Information Search Behavior

Nitisha Tomar, University of Wisconsin - Madison, USA
Akshaya Vijayalakshmi, Indian Institute of Management Ahmedabad, India

Using data from a field study and an M-Turk experiment we examine how ambient lighting affects preference for information search. Ambient darkness likely activates the concept of uncertainty ('being in the dark') that is compensated for through information search. However this is contingent on the motivation to change the state.

7P Firing Founders That Behave Badly: Effects of Moral Versus Type Authenticity on Brand Evaluations

Lan Anh Nu Ton, University of Georgia, USA
Rosanna Smith, University of Georgia, USA

When a company's founder engages in ethical misconduct the company can fire the founder in hopes that the brand's reputation maintains its integrity. This article demonstrates that the removal of the founder still damages the brand through competing effects of both type and moral authenticity.

13I Domestic Employees Online: Exploring Technology Adoption, Motivations, and Symbolic Meanings

Teresa Trevino, Universidad de Monterrey, Mexico
Mónica Salinas, Universidad de Monterrey, Mexico
Andrea Dieck, Universidad de Monterrey, Mexico
Alejandra Sañudo, Universidad de Monterrey, Mexico
Daniela Vela, Universidad de Monterrey, Mexico

Domestic employees represent one of the markets with the greatest opportunity in technology-related matters. This paper contributes to the literature of consumer behavior by shedding light on what drives domestic employees to use the Internet the gratifications they obtain from this use and the symbolic meanings in their everyday lives.

15K Pretty in Pink? The Limits to Gender-Differentiated Targeting

Camila Vincent de Urquiza, University of Florida, USA
Alan Cooke, University of Florida, USA

Although gender differentiation is common some believe that women's products are often higher priced than comparable undifferentiated products without offering gender-specific benefits. We sought to determine the prevalence of these beliefs and the efficacy of various gender targeting marketing practices through a survey and multiple behavioral experiments.

2F Corporate Social Responsibility Information Dilutes Brand Positioning

Jakob Utgård, Kristiania University College, Norway
Tarje Gaustad, Kristiania University College, Norway

In two studies we find that CSR information increases price expectations for low-end positioned brands and decreases price expectations for high-end positioned brands.

1H Make Me Think or Tell Me a Story: The Effect of Category Interest, Need For Cognition, and Transportation Tendency in Social Media Advertising

Kaptceva Valeriia, Hongik University, South Korea
Felicia Caitlin, Hongik University, South Korea
Nara Youn, Hongik University, South Korea

The current research empirically documents the positive effects of category interest need for cognition and transportation tendency on the persuasiveness of social media adverting and more importantly examines the perceived usefulness of posted information and the perceived manipulative intent as the psychological mechanism underlying the observed effects.

13H Judgments of New Product Creativity: The Role of the Firm's Past Failures and Successes

Wade S. Wade, University of British Columbia, Canada
Joey Hoegg, University of British Columbia, Canada
Darren Dahl, University of British Columbia, Canada

Creativity is a critical determinant of success in new product development. However creativity is also linked with increased probability of marketplace failure. We find that laypeople but not business practitioners in training neglect this relationship when predicting the future creativity of products developed by a company with recent failures.

10I The Cult of the Mad Genius: Understanding Consumer Preferences For the Art of Immoral Artists

Jesse Walker, Ohio State University, USA
Melissa Ferguson, Cornell University, USA

How do immoral actions by artists shape consumer preferences for art? We find that consumers like a piece of art more when an artist has committed a serious crime because they see the artist as a "mad genius." However consumers are willing to pay less for the same art.

9J More Unequal, Less Prosocial: Inequality Undermines Prosocial Behaviors

Jiaqian(Jane) Wang, University of Chicago, USA
Angela Y. Lee, Northwestern University, USA

Recent decades have witnessed a worldwide rise in inequality while civil wars and natural disasters are making more demands on prosociality. Analyses of archival data Google Trends and two lab experiments provide evidence that societal inequality prompts people to be more self-focused and in turn suppresses prosocial behaviors.

7E The Professor X Effect – Do People With Disability Achieve Higher?

Ryan Wang, University of Minnesota, USA
Jinjie Chen, University of Minnesota, USA
Alison Jing Xu, University of Minnesota, USA

Extant literature suggests individuals with disabilities encounter negative stereotypes and face discriminations in the workplace. Contrary to existing findings we showed that individuals with disabilities who demonstrate initial success are rated better in various context (i.e. politics education business) because observers generally ascribed greater efforts and hard working to them.

18B Even Numbers Are Evener! Fairness Inferences From Numerical Information

Yansu Wang, Renmin University of China
Jun Pang, Renmin University of China

This research examines the effect of numerical information on fairness perceptions and the downstream consequences of this effect on consumer behavior. Results from three studies show that even versus odd numbers are more associated with fairness. Based on this association consumers perceive prices with even versus odd numbers as fairer.

18I The Effect of Parity Information of Numbers on Variety Seeking Behavior

Yan Wang, Renmin University of China, China
Jing Jiang, Renmin University of China, China
Yafeng Fan, Tsinghua University, China, China
Xiadan Zhang, Renmin University of China, China

This research proposes that parity information of numbers is a robust contextual influence on variety seeking. Across three experiments we demonstrate that even numbers can induce more variety seeking behavior than odd numbers and this effect is mediated by the reliance on feelings (vs. cognition) in decisions.

3F The Time Scarcity Effect: Why Less Time Increases Need for High Color Saturated Products?

Yijie Wang, Hong Kong Polytechic University, China
Yuwei Jiang, Hong Kong Polytechic University, China
Hong Zhu, Nanjing University, China
Xingyu Duan, Nanjing University, China
Chunqu Xiao, Nanjing University, China

Consumers prefer products with high-saturated colors when they experience time scarcity. This proposed effect occurs because time scarcity drives consumers to develop a strong need for product efficacy which results in more favorable attitudes toward products with high saturated colors which can symbolically provide a feeling of product efficacy.

10F The Wisdom of Mission Checks and Consumer Perception of Authenticity in Nonprofits

Lana Waschka, University of Georgia, USA

This qualitative study proposes a new model of market orientation in nonprofits by including a "mission check" step that determines whether a particular action violates the mission or compromises the consumer's perception of "authenticity" in the organization. The model is supported by in-depth interviews of nonprofit managers and consumers.

3D More Than Meets the Eye: Visual Boundaries and Variety-Seeking Behavior

Na Wen, California State University Northridge, USA

Many online retailers use seemingly innocuous visual boundaries when presenting product information. The authors argue that beyond their aesthetic role visual boundaries can strengthen or weaken variety-seeking behavior but the impact depends on consumer cognitive load. In addition information richness serves as a moderator of the proposed visual boundary effect.

2I Ending Temporal Landmark Decreases Preferences For Brand Conspicuousness

Beixi Wen, Renmin University of China, China
En-Chung Chang, Renmin University of China, China

This research found that priming people with the perception of ending of a time period decreases their preference for conspicuously branded products since people are more willing to keep a low profile to get through a time period smoothly at the end of this time period.

5Q To Share is Human:
How Sharing Labels Diminish Sharing and Encourage Own Consumption

Sara Williamson, SUNY Old Westbury, USA
Lama Lteif, University of New Mexico, USA
Ana Valenzuela, Baruch College, USA

In recent years food manufacturers have begun labelling multi-serving packages as meant for sharing. This research shows that sharing labels may ironically encourage consumption and diminish sharing and this effect is not driven by portion perceptions but by a perception of human presence that leads to diffusion of consumption responsibility.

1G The Impact of Mortality Salience on Adolescents' Attitudes Toward Advertisements

Issariya Woraphiphat, North Bangkok University, Bangkok, Thailand
Yupin Patarapongsant, Chulalongkorn University, Bangkok, Thailand

Despite increased exposure of youths to violent media content its impact on youth consumption is not well understood. The current study aims to examine the impact of mortality salience on adolescents' attitudes toward advertisements. We found that mortality salience enhances advertisement ratings. This effect is mediated by social reference seeking.

14P Look vs. Sound of Uncanny Valley: Effects of Visual vs. Audio Humanization on Consumer Adoption of Social Robot

Guang-Xin Xie, University of Massachusetts Boston, USA
Jessie M Quintero-Johnson, University of Massachusetts Boston, USA
Marat Bakpayev, University of Minnesota Duluth, USA

This research examines the effect of multimodal visual/audio humanization on consumer adoption of social robots. The results suggest that product desirability declines linearly as social robots look more like humans. By contrast a plateau appears to occur as social robots move from sounding "nearly" to "perfectly" like humans.

10G The Impact of Corporate Environmental Transgressions on Consumer Support For Non-profits: The Role of Political Ideology and Social Disgust

Chunyan Xie, Western Norway University of Applied Sciences, Norway
Richard P. Bagozzi, University of Michigan, USA
Silvia Mari, University of Milano-Bicocca, Italy

We experimentally test new psychological mechanisms underlying consumer support for nonprofits as a function of perception of corporate environmental transgressions. Results showed that the moral emotion of social disgust mediates the relationship between perceived corporate environmental transgressions and consumer support. Further political ideology moderates effects of transgressions on social disgust.

10C The Impact of Corporate Unethical Actions on Consumer Responses: The Role of Righteous Anger, Attitudes, and Political Ideology

Chunyan Xie, Western Norway University of Applied Sciences, Norway
Richard P. Bagozzi, University of Michigan, USA
Silvia Mari, University of Milano-Bicocca, Italy

We test psychological mechanisms underlying consumer responses toward the firm as a function of perception of corporate unethical actions. Results showed that righteous anger and attitudes mediate the relationship between perceived corporate unethical actions and consumer responses. Further political ideology moderates the effects of transgressions on elicitation of righteous anger.

5L Nutrient Demand and New Product Introduction: The Case of Greek Yogurt

Yi Xie, Xiamen University, China
Richards Timothy, Arizona State University, USA

Empirically identifying changes in attribute preference in revealed-preference data is challenging simply because nutrient-attributes do not change much over time. We exploit the introduction of Greek yogurt to cleanly identify how changes in nutrient-attribute composition changed intra-category substitution patterns and how new-product introductions can shape aggregate nutrient consumption profiles.

5O Nutrition Label Format and Consumer Attention: The Role of Involvement

Yi Xie, Xiamen University, China
Naomi Mandel, Arizona State University, USA
Carola Grebitus, Arizona State University, USA

We conducted an eye-tracking experiment to test whether FDA's modifications to the Nutrition Facts label influence attention and the role of involvement. We show that less involved consumers increase attention to the modified version and the modified label help highly involved consumers find necessary information more quickly.

7B Witnessing Moral Violations Increases Boundary Preference

Chunya Xie, Renmin University of China, China
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This study shows that witnessing immoral behaviors influences consumers' preference for boundaries. Specifically witnessing unethical behaviors increases consumers' boundary preferences compared to witnessing moral behaviors as well as some events irrelevant to morality.

18J The Power of Social Comparison in Price Information Processing

Lina Xu, New Mexico State University, USA
Mihai Niculescu, New Mexico State University, USA

We propose that consumers enjoy the feeling of outperforming social others by taking advantage of a deal. This research explores the impact of price comparisons on buying behaviors through the lens of social comparison (vs. counterfactual thinking) to increase consumers' perception of a good deal.

17E The Effects of Perceived Economic Mobility on Temporal Focus and Preference for Immediate Rewards

Chun-Ming Yang, Ming Chuan University, Taiwan
Ying-Ching Lin, National Chengchi Uniersity, Taiwan
Chia-Chi Chang, National Chiao Tung University, Taiwan

Three studies that examined system justification and economic mobility provide convergent evidence suggesting that exposure to low perceived economic mobility information reduces consumer's endorsement of just-world beliefs which in turn reduces their future focus and increases their preference for immediate rewards.

3G The Impact of Social Crowding on Consumer Preference For High Visual Contrast Products

Chen Yang, Renmin University, China
Echo Wen Wan, University of Hong Kong, China
Ying Ding, Renmin University of China

Across a set of six experiments we show that social crowding will enhance consumers' need for a boundary between self and others thus make them prefer for high visual contrast products. Furthermore our results also document that this effect is contingent upon gradient color and perceived familiarity of other consumers.

14F Alexa or Alex? The Gender of Artificial Intelligence Matters as Much as the Look

Hongjun Ye, Drexel University, USA
Haeyoung Jeong, Drexel University, USA
Wenting Zhong, Drexel University, USA
Siddharth Bhatt, Drexel University, USA
Rajneesh Suri, Drexel University, USA

The present research shows that in addition to the effects of anthropomorphization on consumers' perceptions of products that have artificial intelligence (AI) features AI gender has its own influences. When an AI was described as male participants expected the product to have greater capability to handle complicated requests.

1D The Drink Might Not Give You Wings, But Its ad Might: Neuroimaging Evidence Examining Advertising Effects on Consumer Cognition

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Siddharth Bhatt, Drexel University, USA
Wenting Zhong, Drexel University, USA
Amanda Sargent, Drexel University, USA
Jan Watson, Drexel University, USA
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Hasan Ayaz, Drexel University, USA
Rajneesh Suri, Drexel University, USA

This research demonstrates how neuroimaging methods used alongside behavioral measures can reveal valuable insights about advertising effectiveness. Results from a laboratory experiment using non-invasive functional-near infrared spectroscopy suggests both a need and the advantages of employing neuroimaging to examine the efficacy of advertisements.

19G The Role of Personal Self-Serving Technologies in Responses to Service Failures

Xiao Shannon Yi, Chinese University of Hong Kong, China
Lisa C. Wan, Chinese University of Hong Kong, China

We found that consumers react differently under service failure when they use SSTs with different ownerships. That is when they adopt personal SSTs (vs. non-personal SSTs) to complete serf-services they are more likely to blame the service failure on themselves (vs. on other people).

14H Saying is Believing: How Voice Command Stabilizes Consumer Preferences

Yoni Yoon, Korea University, South Korea
Hyang Mi Kim, KT
Janghyuk Lee, Korea University, South Korea
Hyung Gyoun Byun, KT

AI has enabled consumers to command their choice via voice. How is this novel choice modality impacting consumers? Large panel data indicates that the voice-command 1) reduces browsing 2) thereby reducing total consumption but 3) increases payment per consumption. We discuss why voice increases (vs. reduces) preference-based (vs. browsing-based) choice.

8I I am so Proud of You! The Effect of Vicarious Pride on Preferences For Self-Improvement Product

Nari Yoon, Indiana University, USA
H. Shanker Krishnan, Indiana University, USA

Our research examines how feeling pride from another person's achievement – vicarious pride – affects consumer preferences. We find that vicarious pride increases the desire to be close to the person who achieved ultimately leading to preferences for self-improvement product. This research investigates an underexamined form of response to another person's achievement.

3C Such Great Heights:
Visualization of Height Increases Luxury Perceptions in Consumers

Huan You, University of Manitoba, Canada
Yan Zhang, National University of Singapore, Singapore
Fang Wan, University of Manitoba, Canada
Andrew Lee, University of Manitoba, Canada

Height is a powerful cultural metaphor for power. However the effect that height has on luxury perceptions has not been extensively studied. When consumers encounter high-up places they may be subject to perceptions of effort and exclusivity. This paper aims to unravel the underlying mechanisms of height and luxury perceptions.

16M Rational Gifts For Communal Recipients, Emotional For Exchange:
How Relational Norms Influence Gift Choices

Lingzhi Yu, Fudan University, China
Tingting Zhao, Fudan University, China
Xiucheng Fan, Fudan University, China

This research explores gifting behaviors from the perspective of relational norms. It finds when people purchase gifts for communal (vs. exchange) recipients they depend on rational analyses (vs. intuition and impressions) and prefer cognitively (vs. affectively) superior products. Givers' perception of being rational decision makers moderates this effect.

3L You Are What You Sound: Signaling Status With Product Sounds

Zhihao Yu, University of South Florida, USA
Timothy B Heath, University of South Florida, USA

Previous research shows that an individual's visual cues (attire posture etc.) influence other people's impressions of them. We extend that research to the auditory domain by showing that the individual's shoe sounds can increase their perceived status though nicer attire sometimes blunts and even eliminates the effect.

12C The Influence of Consumers' Political Ideologies on Online Review Persuasiveness

Sik Chuen Yu, University of Sydney, Australia
Donnel Anthony Briley, University of Sydney, Australia
Pennie Frow, University of Sydney, Australia
Kiju Jung, University of Sydney, Australia

Prior research suggests conservatives have a stronger desire than liberals to feel affiliation with others. The present research argues that these fundamental affiliative needs drive conservatives (vs. liberals) to align their preferences with reviewers' opinions because having the same product evaluation as others offers a sense of social connection.

16J How Reward Schedules Impact Consumers' Behavioral Acquisition and Retention

Yiqi Yu, Peking University, China
Ying Zhang, Peking University, China

This research explores how reward schedules impact consumers' behavioral learning process. We propose that whereas a fixed (vs. variable) reward schedule better facilitates the acquisition of a new behavior a variable (vs. fixed) reward schedule does better in retaining the acquired behavior. Data from lab and field supported our hypotheses.

17P Shopping versus Owning:
Moral Judgments of Luxury Consumption in Different Consumption Stages

Tianjiao Yu, Washington University, USA
Cynthia Cryder, Washington University, USA
Sydney Scott, Washington University, USA

We test how observers judge consumers' moral character in different stages of luxury consumption. Consumers are viewed more negatively when shopping for luxury goods than when owning the same luxury goods. This research extends prior findings by studying moral judgments of consumption while simultaneously exploring consumption as a multi-stage process.

14L To Err is (Not) Human:
Examining Beliefs About Errors Made by Artificial Intelligence

May Xinyu Yuan, University of Miami, USA
Noah VanBergen, University of Cincinnati, USA
Bryan Buechner, University of Cincinnati, USA
Daniel M Grossman, University of Cincinnati, USA
Caglar Irmak, University of Miami, USA

Prior research finds that consumers are reluctant to rely on artificial intelligence (AI) to make decisions. This research proposes a lay-theory account to explain this aversion. Two studies show that consumers think AI lacks the ability to distinguish different types of errors and this belief prevents them from adopting AI.

6A Poor But Grateful: An Investigation of Low-Income Consumers Coping With Poverty

Gul Yucel, Bilkent University, Turkey
Duygu Akdevelioglu, Rochester Institute of Technology, USA

This research contributes to the existing literature on transformative consumer research by identifying mechanisms that affect low-income consumers' perception of poverty and provide mechanisms to low-income consumers to cope with consumption restrictions. Our framework points strategies focusing on religion and social capital to cope with the constraints of consumer culture.

19N Empowered, Therefore I Engage

Mujde Yuksel, Suffolk University, USA

Initiating consumer engagement on social media is considered to be pivotal to brand success in today's digital world. This study illustrates that enabling consumers with empowering tools results in higher social media shares through psychological empowerment and consumer influence. However this effect disappears for consumers low in opinion leadership.

12L Are Interdisciplinary Ideas Always Good?
Field Insights on New Information Consumption

Kseniia Zahrai, University of Canterbury, New Zealand
Ekant Veer, University of Canterbury, New Zealand
Paul William Ballantine, University of Canterbury, New Zealand
Herb de Vries, University of Canterbury, New Zealand

This research shows that excessive social media users demonstrate an imbalance between a reflective and impulsive system in their mind. Little is known about drivers of this problematic behaviour. This study conceptualises the underlying mechanism of excessive social media use and offers practical implications to prevent its recurrence.

18E Have More, Pay More: Distributive Concerns in Price Fairness Perceptions

Camilla Zallot, Erasmus University Rotterdam, The Netherlands
Gabriele Paolacci, Erasmus University Rotterdam, The Netherlands
Amit Bhattacharjee, Erasmus University Rotterdam, The Netherlands

Two studies find that people perceive it as fair to charge wealthier customers more and poor customers less for the same product even if they are willing and able to pay equally. Price fairness perceptions may be affected by how a market exchange affects irrelevant existing economic inequalities.

13G The Mechanisms Underlying the Effect of Expected Effort on Willingness to Cocreate

Xianfang Zeng, University of Calgary, Canada
Mehdi Mourali, University of Calgary, Canada

New technologies create a knowledgeable consumer base for the consumer-firm cocreation of market offerings. Experimental results supported two mechanisms underlying the effect of expected effort on consumers' willingness to cocreate: perceived probability of success and perceived value of cocreation. More importantly this research discussed the relationship between these mechanisms.

11J Unappealing Durability:
The Effects of Mortality Salience on Consumers' Preference Regarding Durable Products

Chen Zengxiang, Sun Yat-Sen University, China
WEI Yijia, Chinese University of Hong Kong, China
Wang Lin, Sun Yat-Sen University, China

Consumers usually views the durability of products as a positive trait when making purchases. However the current study shows that mortality salience can make consumers prefer products with low durability. Our study contributes to the mortality salience literature and discusses product durability's effect on consumer preference.

8O Feeling Embarrassed, Leave Me Alone:
The Impact of Embarrassment on Preference For Facial Prominence

Xiadan Zhang, Renmin University of China, China
Jing Jiang, Renmin University of China, China

This research proposes that embarrassment increases individuals' needs for space to avoid others' attention and thus predicts a preference for human images of low facial prominence. The effect is heightened when the human image and the consumer are opposite sex (vs. same sex).

11K A Poor Man is a Suspicious Man?
Effects of Scarcity on Products with Handwritten Typefaces

Yue Zhao, Nanjing University, China
Yunhui Huang, Nanjing University, China

Previous research shows that handwritten typefaces create perceptions of human presence. This research shows that because consumers high (vs. low) in scarcity consider other people as less trustworthy they evaluate products with handwritten typefaces less favorably. In consequence they prefer products with machine-written typefaces over those with handwritten typefaces.

19S Exploring Antecedents and Outcomes of Renting Over Buying (RoB) Preferences For Home Appliances and Furniture Products

Danni Zhao-Meunier, ESCP Europe, France
Benjamin G. Voyer, ESCP Europe, France
Julien Schmitt, ESCP Europe, France

This study proposes a theoretical framework to understand consumers' choices for renting over buying ('RoB') behavior and its consequences. More specifically we investigate the role of materialism variety seeking frugality and brand-extended self-construal in explaining preferences for 'RoB'. Moreover we explore how 'RoB' subsequently affects brand attachment and brand loyalty.

2J Is Your Brand Logo in the Right Size?

Wanyi Zheng, University of Hong Kong, China
He (Michael) Jia, University of Hong Kong, China

Consumers' perceptions of the focal brand can be easily shaped by various logo design features. This research demonstrates that "bigger is not always better" by examining when the size of a brand logo has an inverted U-shaped relationship with consumers' evaluation of the brand logo.

19E Improve Yourself to Strive For More Space: Social Crowding Increases Preference For Self-Improvement Products

Jiaqi Zhong, Renmin University of China
Ying Ding, Renmin University of China

The results from two experiments and one secondary dataset suggest that social crowding would enhance consumers' need for self-improvement and thus increase preference for self-improvement products. Importantly we further document that this effect would be moderated by competitive mindset and perceived social status mobility.

11I The Impact of Power Distance Belief on Consumer Response to Negative Publicity

Qichao Zhu, Tsinghua University, China
Maggie Wenjing Liu, Tsinghua University, China

Negative publicity is prevalent yet little attention has been paid to cultural differences in consumer response to negative publicity. This research reveals that power distance belief dampens consumers' negative response to negative publicity and that this effect is attenuated when the brand is positioned as an underdog.

6E A Meta-Analysis of the Antecedents and Consequences of Smartphone Addiction

Ying Zhu, University of British Columbia, Canada
Jingjing Ma, Peking University, China
Jingjing Wang, Peking University, China

Considering the significance of smartphones in consumers' daily lives and the conflicting previous findings we conduct a meta-analysis of research from marketing psychology and computer science to address key research questions: What are the antecedents and consequences of smartphone addiction and which has the strongest effect?

6J Giving up Privacy For a Healthier Way of Living – Understanding Consumers' Attitude Toward Behavior-Based Health Insurance Products

Vita Eva Maria Zimmermann, Heinrich Heine University Düsseldorf, Germany
Mirjam Zahner, Heinrich Heine University Düsseldorf, Germany
Luisa Fuhrberg, Heinrich Heine University Düsseldorf, Germany
Peter Kenning, Heinrich Heine University Düsseldorf, Germany

Behavior-based health insurance products (BBHIPs) allow insurers to process wiser consumer risk assessments. For consumers they necessitate privacy reduction but also have potential financial benefits and debiasing mechanisms inherent to improve health behavior. We tested which of these benefits can outweigh privacy concerns' influence on attitude toward BBHIPs.

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